

Emergency Response Teams: Standing By and Ready to Go

SNLA employees, here's your first assignment for today: Memorize two phone numbers — 144 and 117. Knowing them could save your life, or that of a colleague.

Emergency response effectiveness at Sandia depends on fast action, especially in life-threatening situations. Dialing one of the two numbers above sets the wheels in motion for a rapid response by teams of experts equipped to deal with every conceivable emergency.

Assignment two: Know when to use the two phone numbers. Use the first — 144 — for all emergencies *except* fire. It rings at Security, Medical, and the Area V gate house.

Use the other number — 117 — to report fires. It rings at the Kirtland AFB Fire Department and Security and brings a fire-fighting team to your vicinity.

Hold That Line

"It's important that employees give as clear and complete a picture of the situation as they can when calling on either emergency line," says Bob Baca, supervisor of Patrol Division-North 3434. "And it's equally important — if they're not in immediate danger — that they stay on the line until their contact at the other end tells them it's OK to hang up."

Response levels are different, depending on the nature of the emergency. When a non-fire emergency call comes in to the Headquarters Communications Center (HCC) in Bldg. 801, whoever takes the call has to make some split-second decisions based on the incoming information. Is the emergency major or minor? What response teams, if any, should be sent to the scene? Should the Duty Officer be called? (See "24-Hour-a-Day Job.")

No matter what kind of incident it is, a field lieutenant from Security is sent to the scene to assess the situation, according to Capt. Bill Wolf (3434), who's in charge of the desk lieutenants who answer the 144 number at the HCC from 7 a.m. to 3 p.m. or "day shift." "We rely on the field lieutenant to let us know if he or she thinks a Field Command Post [FCP] should be set up on site," says Bill.

An FCP is usually set up if (1) there's a possibility of loss of life or property, (2) it's a situation that will generate a lot of public attention, or (3) other agencies are going to be involved — for example, DOE, or the Kirtland AFB Police.

"If the decision's made to set up an FCP, the ranking Security Officer in Bldg. 801 goes to the scene in our mobile command post vehicle and takes over as On-Scene Commander [OSC]," Bill says.

(That Security Officer is normally Bill during the day, and Captains Harold Garcia and Carolyn Lucero, both 3434, on the swing and graveyard shifts, respectively.)

"Green Monster"

The mobile command post, dubbed "The Green Monster" by Security insiders, has cellular phones, a generator that can be used for on-scene power once an FCP is established, a Security communications system to keep in touch with both North and South Area forces as well as local hospitals, and maps and building layouts of all SNLA areas.

Once on site, the OSC assumes command from the Sector Chief (see LAB NEWS, July 17, 1987); the gravity of the situation dictates how many Security Inspectors the OSC calls to the scene. "It could be two or three, or it could be a dozen," says Bill. "For instance, if we have to cordon off an area, we call in more people to get the job done."

As appropriate response teams — Medical, Fire, ES&H (Environment, Safety, & Health), Plant Engineering — arrive at the emergency scene, the OSC coordinates their activities. "However, it's really a cooperative effort," Bill explains. "We [OSCs] rely

(Continued on Page Four)



KIRTLAND AFB FIRE CHIEF Pete Semanick drew top-rung-on-the-ladder position when he recently got together with SNLA fire protection engineers Chuck Girard (left), Vern Duke (behind Chuck), and Dennis Kirson (all 7862) at the KAFB East Fire Station. Kirtland fire fighters respond to all Sandia fire alarms.



LAB NEWS

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SANDIA NATIONAL LABORATORIES

SEPTEMBER 11, 1987

Sandian Receives Weapon Program Award at LANL

Add Fred Zutavern's (1248) name to your list of Sandians who received a 1987 DOE Weapon Recognition for Excellence Award (see LAB NEWS, Aug. 28, 1987).

As a member of Los Alamos National Laboratory-based NDEW (Nuclear-Driven Energy Weapons) design team, Fred was honored during ceremonies at LANL on Aug. 26. James Culpepper, Acting Director of Military Application, presented the award to the 36-member team.

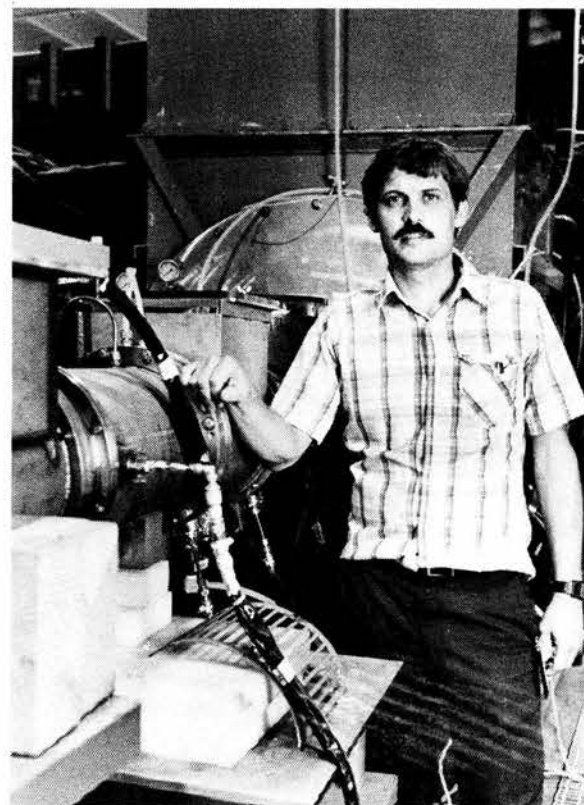
(In contrast to Sandia, where individual awards are the norm for weapon program honors, LANL's awards often go to large groups of people.)

The award recognized the design team for its outstanding work (on physics theory and development of experimental apparatus) in the interlaboratory SDI effort. Fred and a design group from SNLA developed, tested, and calibrated new diagnostics equipment for a major NDEW experiment that was "very successful," in Fred's words.

Other Sandians who worked on the project are Bonnie McKenzie, Leonard Martinez, Bob Ripple, Scott Mills, Malcolm Buttram (all 1248 — Malcolm is division supervisor); and Jim Dritt, EG&G contract employee. Ken Prestwich (1240) and Pace VanDevender (1200) provided management support.

Fred didn't bring home the award plaque — it stays at LANL. "But," he says, "I'll probably get a picture of it!"

●PW



WEAPON PROGRAM AWARD WINNER Fred Zutavern (1248) stands beside portion of Hermes III pulse-forming line, used to calibrate diagnostics equipment for NDEW experiments.

Antojitos

Keep an Eye on This Guy Art Arenholz (3710) is one of several long-time Sandians who worked for ACF Industries in the late 50s. Art hired in as a security guard at ACF but bid down to an X-ray lab technician job (in spite of the \$100 a month decrease in pay) so he'd have a regular shift that would let him attend classes at UNM. Shortly thereafter, the guard force was reduced, and new-hires were laid off. Had Art stayed in security, he'd have been one of them. A few months later, he heard of an opening in the Non-Destructive Test lab at Sandia and quit ACF -- just before the company closed down in Albuquerque.

A few years later, Art is a division supervisor. He's working in his office one day, and a custodian enters, empties the wastebasket, and asks Art, "Aren't you the guy who was in the ACF guard force, took a demotion to the X-ray lab, avoided the guard layoff, then got out of ACF just before it closed?" "That's me," Art replies. "Well," says the custodian (whom Art then recognized as a former expeditor at ACF), "I'm keeping an eye on you -- if you leave Sandia, I'm going with you."

* * *

Ta-ta Yourself, Editor Jack Willis (2566), Don Schubeck (3412), and Carl Sprague (former Sandian) provided some of the more tasteful responses to my recent mini-diatribes on "ta" syllables in front of "tives." I quote from Jack's note: "Pending quantitative and qualitative analysis of your grammar lesson, I will make the tentative judgment that your prohibition of the use of 'ta' before 'tive' is a temporary aberration."

Aye, mate, that it is/was. I leapt to a blanket prohibition (which has nothing to do with the Volstead Act, and is moral, if not intelligent, to boot). I should have been a tad more conservative and proscribed "ta" only in "preventative" and "interpretative."

Don and Carleton both noted that "preventative" is in the Sandia-issued dictionary. That fact cuts little ice with me. So's "ain't." So are several four-letter words. So are a host of other linguistic lapses.

So why are they in the dictionary? Because that's the way some people talk/write sometimes. Beginning with Webster's Third International (1961), dictionaries describe rather than prescribe the language. Forget the air of authority in the ad copy -- dictionary compilers have abdicated all responsibility for setting precise communication standards.

Pity, that. As George Orwell pointed out (in "Politics and the English Language"), "the slovenliness of our language makes it easier for us to have foolish thoughts."

* * *

More Railing & Ranting I've come to expect our undereducated youth to make statements such as "Your facts, man, don't jive with reality." Now *Science News* is guilty of the same solecism: "The mind is apparently willing to short-circuit itself in this way . . . because new information may not jive with older experiences, such as important childhood memories." Jive? JIVE? The word is "jibe," meaning "to be in accord, agree." ●BH

* * *

For Bill Thomas (7251), Ben Benjamin, and the Other Sandians at Trinity: "My two great loves are physics and New Mexico. It's a pity they can't be combined."
--J. Robert Oppenheimer (from 1930s)

Take Note

Irwin Welber (1) will speak at an awards banquet honoring outstanding minority engineering majors from New Mexico on Sept. 25 at the Albuquerque Hilton. The banquet is part of the 7th Annual Hispanic Engineering Organization Science and Engineering Career Fair. Other speakers include Mayor Ken Schultz, UNM President Gerald May, LANL Deputy Director Jim Jackson, and APS Superintendent Lillian Barna. For more information, call Fred Norwood (1533) on 4-3306.

* * *

The Albuquerque Section of the Society of Women Engineers (SWE) will hold its first meeting on Sept. 22 at 6 p.m. at the Golden City Restaurant. After dinner, featured speaker Jack Hueter (3523) will present "Creativity -- Choice or Chance?" If you're interested in attending, call Jan Williams (7841) on 6-5406 or Margie Whipple (7832) on 4-2482.

* * *

The New Mexico Chapter of the American Vacuum Society is offering four short courses in Vacuum Science and Technology at the Amberley Suite Hotel in Albuquerque on Oct. 19-22. Courses include: "Basic Vacuum Technology," "Vacuum Leak Detection," "Introduction to the Elements of Cryopumping," and "Digital Electronic Applications in Vacuum Technology." Course descriptions and registration forms are available in the LAB NEWS office (Bldg. 814). For information on course registration, contact the NMAVS Administrative Assistant on 292-7763.

* * *

The American Association of Hispanic CPAs is offering a Public Sector Session on Oct. 9 at the Four Seasons Hotel. Registration is at 8:30 a.m. Topics include "What's New, What's Next in Governmental Auditing" and "Political Environment Impacting on the Auditor." For more information, contact Harold Fine (AL/OIG/WR) on 6-1078.

* * *

Art and Science Exhibition 87 will display the works of scientific, technological, and visual artists Oct. 4-23 in the Fine Arts Bldg. at the State Fairgrounds. The exhibitors are artist/scientists "who combine invention with the latest tools that science can provide in order to create new visions," says Doug Czor, co-curator. There is no admission charge.

* * *

Paul MacCready of AeroVironment, Inc., in Monrovia, Calif., will speak on "Innovation by Man, Innovation by Nature" at UNM's Mechanical Engineering Bldg., Rm. 218, at 6 p.m. on Sept. 14. MacCready is internationally recognized for his achievements in designing lightweight aircraft, including the Gossamer Condor, the Gossamer Albatross, the Solar Challenger, and the Bionic Bat. He and his team recently developed and flew a radio-controlled, wing-flapping, flying replica of a giant pterodactyl. For more information, contact Prof. Randy Truman on 277-6296.

* * *

Discover Chinese culture in an evening of songs and dances by the Youth Goodwill Mission from Taiwan, Republic of China, on Sept. 17 at the Kiva Auditorium at 7 p.m. The performance is sponsored by the Albuquerque Sister Cities Foundation, the New Mexico Chinese Association, and the UNM Chinese Student Association. Tickets are \$5; \$3/students and senior citizens. For more information, contact Tony Chen on 298-6477.

* * *

If you plan a trip to France, are a literature buff, or want to learn French for translating haute cuisine menus, check the Alliance Francaise of Albuquerque classes. They're organized for small groups during the day or evening in the informal atmosphere of the teacher's home. Fall session for adults starts Sept. 14; children's classes on Sept. 19. The Ecole De L'Alliance Francaise D'Albuquerque is a non-profit organization at UNM founded for the purpose of encouraging study of the French language and culture. For information and enrollment, call Valérie Putnam on 255-0386.

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SANDIA NATIONAL LABORATORIES

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Oregon

Mark Despain (2541)
John Gustafson (1413)

Pennsylvania

Samuel Cancilla (2858)
Daniel Davenport (1421)

Texas

James Morrow (5267)

New Scanning Acoustic Microscopes: Latest Technology in Nondestructive Evaluation

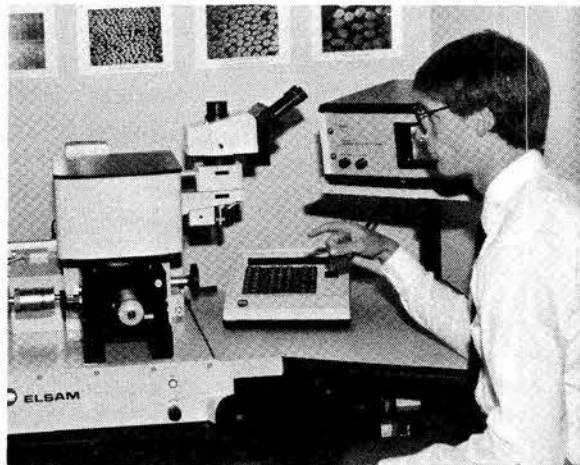
Two new scanning acoustic microscopes in Acceptance Technology Division 8444 have already proven invaluable — and popular throughout the Nuclear Weapons Complex — for nondestructive evaluation (NDE) of parts for weapon and other systems.

These acoustic microscopes are the latest technology in high-resolution acoustic imaging, according to Graham Thomas (8444). The systems have the combined ability to display defects in stainless steel welds and to examine the microstructure of a solid-state-bond interface.

The technology was pioneered by Calvin Quate, who was a director and VP of Research at Sandia Albuquerque (1958-61) and has been on the faculty of Stanford's electrical engineering department since he left Sandia; he's currently acting chairman of the department.

Typical applications at Sandia include locating porosity in composites and ceramics, displaying defects in welds, detecting "unbonds" in metallic coatings, and visualizing the metallization in electronic chips.

"One of the new acoustic microscopes, the 'Anorad scanner,' is a high-resolution, computer-controlled, ultrasonic system that generates images of defects in parts," explains Graham. "By using ultrasonic NDE, we can penetrate materials with high-frequency acoustic energy — sound waves — reflected by abrupt changes inside the part. These changes may indicate problems — cracks, porosity, delaminations [separations], or inclusions." The resulting ultrasonic reflections can be processed to pro-



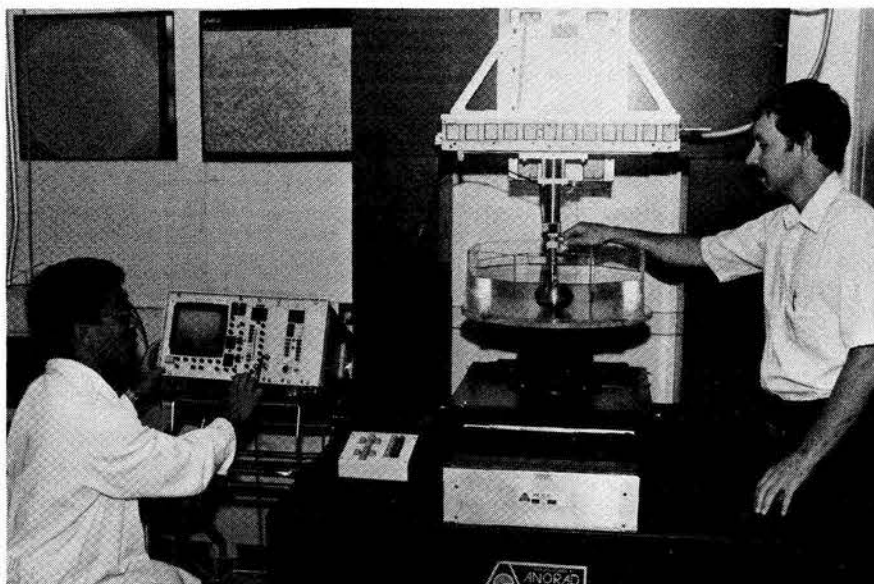
TODD GARLICK (8444) demonstrates some of the features of the ELSAM, a scanning acoustic microscope that operates in the 800 megahertz to 2 gigahertz range. It's currently the only such device in the Nuclear Weapons Complex.

duce an image of the area that caused the reflection.

The technological advances of the Anorad scanner include its high-resolution positioning ability and its high-frequency ultrasonic electronics. The scanner is capable of 1-micron positioning, and, when focused with ultrasonic transducers, can sense defects as small as several microns. "The scanner can display material features that have areas one-fifth the cross-section of a human hair," Graham notes.

"The beauty of ultrasonic NDE is that it allows you to 'see' inside the part you're checking — or interrogating, to use NDE jargon — without affecting it in any way," says Graham. "We've come to depend heavily on this state-of-the-art electronic instrumentation. So when higher-frequency equipment becomes available, we will be able to improve our ultrasonics capabilities and detect even smaller defects. We also, of course, rely on sophisticated software for data acquisition, signal processing, and image analysis."

The second new scanning acoustic microscope is designed to operate in a much higher frequency domain than the Anorad scanner, which operates at frequency levels less than 100 megahertz (millions of cycles). The ELSAM (Ernst Leitz Scanning Acoustic Microscope) operates in the 800 megahertz



GRAHAM THOMAS (8444; right) and Dave Andaleon, a summer student from Washington State University, demonstrate the scanning capabilities of the Anorad Corporation device. It operates at frequencies below 100 megahertz.

to 2 gigahertz (2000 megahertz) range, but scans an area only one millimetre square. It's currently the only ELSAM in the entire Nuclear Weapon Complex.

"We use the ELSAM to display grain structure in metals, fibers in composite materials, and metallization of electronic components," explains Graham. "The ELSAM also enables us to evaluate very thin coatings — on the order of a micron in thickness — on materials for delaminations as well as between the coatings and the parent material."

Results of an ultrasonic evaluation are color-enhanced by "pseudocoloring" the image to heighten defect detectability. This image can be produced on a 4x5- or 8x10-inch print, a viewgraph, or 35mm film.

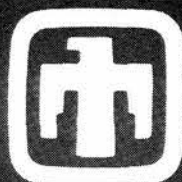
Then Graham and others in the division work with the people responsible for developing the component under study; together they evaluate the size, location, orientation, and severity of the defect. "A lot of the work we do is with development hardware, new materials, or new types of welds, says Graham. "Ultrasonic evaluations provide valuable information about the component's integrity and may result in improvements in the processing of the material it's made from."

Graham views acoustic microscopy as a "new era in ultrasonics" with important applications in NDE. The Acceptance Technology Division supports all areas of Sandia Livermore, and has worked with Sandia Albuquerque, Lawrence Livermore, and Los Alamos national laboratories, as well as the weapon production agencies.

These two instruments, plus the original scanner (called AMUS — Automated Multi-axis Ultrasonic Scanner), provide Sandia with a full range of scanning capabilities for NDE. As new options are installed on the ELSAM, the ultrasonic nondestructive testing laboratory will operate at frequencies from 0.4 Mhz to 2 Ghz. According to Graham, the ultrasonic R&D facility not only provides vital support to designers and material scientists but also allows the latest technology to be transferred to the production agencies, thereby playing a major role in ensuring the quality of weapon components.

Sympathy

To Darcy Roberts (8161) on the death of her grandmother in Wenatchee, Wash., Aug. 12.

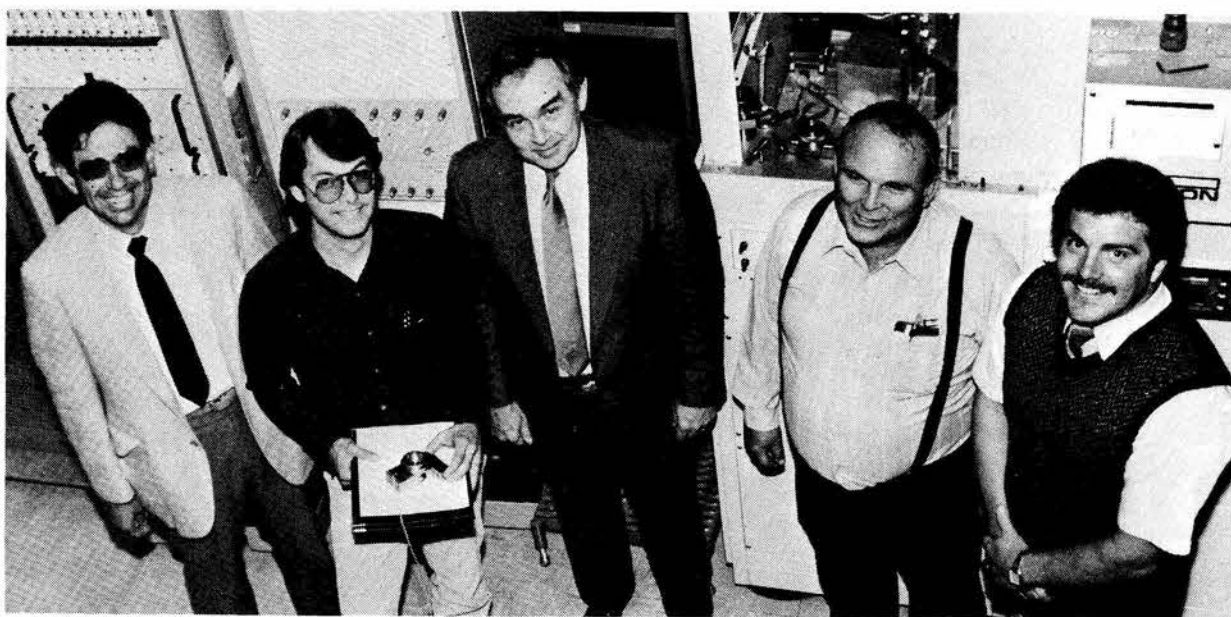


SANDIA LIVERMORE NEWS

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SANDIA NATIONAL LABORATORIES

SEPTEMBER 11, 1987



TOURING SANDIA'S welding labs recently was Professor Karl Graff (center), executive director of the Edison Welding Institute in Columbus, Ohio, and a former chairman of the Welding Engineering Department at Ohio State University. He familiarized himself with state-of-the-art welding technology at Sandia and discussed technology transfer. Flanking Graff are (from left) Louie Tallerico, Scott Marburger (holding a confining die used for making resistance welds), Ken Hicken, and Bob Arnot (all 8184). Scott, Ken, and Bob are alumni of Ohio State. Graff also met with John Brooks' Div. 8312.

Response Teams

on the experts who know what has to be done; we call for additional people and equipment as needed." OSCs also take charge of crowd and traffic control, so response teams can enter the area without difficulty.

"We know employees in the vicinity of an emergency are going to be concerned," says Bob Baca, "but people shouldn't crowd around; that only hampers emergency operations. If the OSC issues instructions to clear the area, that's exactly what employees should do."

Fire-Fighting Responsibilities

If there's a fire, the Base Fire Department has fire-fighting responsibility, according to Vern Duke (7862), one of three fire protection engineers at SNLA. (The others are Chuck Girard and Dennis Kirson, also 7862.) "When the Fire Department gets a 117 call, it immediately sends fire fighters to the scene," says Vern. "Security gets the 117 call at the same time and notifies the proper people — fire protection engineers, the ES&H Department [3310], Medical, Maintenance, or whoever else should be at the scene."

Until those people — and the Base fire fighters — arrive, the fire teams in each major building and the Sector Chief are in charge. "It's up to the fire teams to respond quickly, then evacuate buildings and locate the source of the fire, if possible," says Vern.

"If it's safe to do so, they also use on-site portable extinguishers and ensure that sprinkler valves are open," he continues. Vern points out that building fire team members have a basic responsibility to themselves, as well. "If their personal safety is jeopardized, they should withdraw from the scene," he says.

Through mutual aid agreements with the city of Albuquerque, the Base Fire Department can call in off-Base fire experts or obtain special equipment from outside sources if needed, Vern says.

Medical Emergencies

When 144 rings in Medical (at the nurses' station and at the front desk), a Medical Emergency Response Team (MERT) swings into action if medical assistance is required, reports Dr. Larry Clevenger (3320). "We depend on the nurses to collect as much information as possible on the 144 line and to make a judgment on the type of response required," says Larry. A MERT includes a staff physician and a nurse or nurse practitioner — and more people if there's a serious crisis such as a multiple-injury situation. The response team travels to the emergency scene in a Sandia ambulance driven by Inspectors from Security.

Sandia ambulances — one in Area I and one in Area V — are equipped to meet state and federal standards. They contain trauma equipment (backboards, extrication splints, bandages); advanced cardiac life support equipment (defibrillators, oxygen,



CAPT. BILL WOLF (3434) is in charge of desk lieutenants who answer the 144 emergency number at Security during the day shift.



MEDICAL EMERGENCY RESPONSE TEAMS regularly participate in in-house emergency response training exercises such as this one held last year.

medication); and equipment to treat special disorders such as diabetes or seizures. Also aboard is a cellular phone and a communication system to contact local hospitals if necessary.

Once on the scene, the team from Medical assesses the situation to determine what action is required. "If it's what we call a 'minor' — the situ-

ation is not life threatening and immediate care for serious injury is not required — we transport the person back to Medical for evaluation," says Larry.

"If the situation is more critical, we monitor the patient on site, administer appropriate medical care and decide whether the person should be taken to Medical or a local hospital," Larry continues. "Under what appear to be life-threatening circumstances, we stabilize the patient and transport him or her to the emergency room at a local hospital as quickly as possible."

Though Sandia has no formal contracts with local hospitals, "we tend to use Kaseman [hospital] frequently," says Larry. "It's close, and we've often worked with the staff there. They're quite aware of unique medical problems that might arise at the Labs."

(Kirtland AFB Hospital is closer, but the VA Hospital now handles Kirtland's emergency cases.)

Sandia does have a memo of understanding with UNM Hospital for care of radioactively contaminated persons. UNM has the support staff and expertise to handle this kind of case, according to Larry, and a procedure in place to care for patients. Larry points out that this type of emergency is not time-critical, so hospital proximity isn't quite as important.

"UNM is also our Trauma I [major crisis] facility and maintains the Lifeguard I helicopter transport capability," he says. "That's especially valuable if we should have a medical emergency in one of our remote areas."

The Medical staff regularly participates in in-house emergency response training exercises. Additionally, physicians and nurse practitioners are certified in the American Heart Association's Advanced Cardiac Life Support program, and two physicians (Drs. Rockwell and Hays, both 3320) are certified in Advanced Trauma Life Support.

All physicians and most nurses have also taken a course at Oak Ridge, Tenn., that covers emergency care and treatment for radiation-related injuries.

Security Inspectors who serve as ambulance drivers also can assist during a medical emergency, since all SIs have received advanced first aid training, including CPR (cardiopulmonary resuscitation).

●PW

(Ed. Note: This is another in a series of articles on Sandia's emergency preparedness program. Next: Emergency response by Environment, Safety, and Health Dept. 3310 and Plant Engineering.)

24-Hour-a-Day Job

When a 144 emergency call rings at the Headquarters Communication Center (HCC) in Bldg. 801, the desk lieutenant must, among other things, decide whether or not to involve the Duty Officer who's on call that day.

Labs Duty Officers (DOs), a group of seven directors and department managers, are on call 24 hours a day for seven days during their "watch." They're an integral part of Sandia's emergency response program.

"The important thing about the DO concept is that it establishes a command and control system outside of normal management channels for taking charge in case of an emergency," says Steve Ross, project leader of emergency preparedness in Div. 3438. "DOs make upper management decisions on critical emergency issues."

If an emergency appears to be something that cannot be handled by on-duty Security people and response teams, the DO always gets contacted. "Desk lieutenants contact the DO when they believe that they don't have sufficient authority or resources to solve the problem, or that the situation may escalate to that point," says Bob Baca (3434). "DOs are also involved if it's quite clear that the situation will generate a lot of public or media attention."

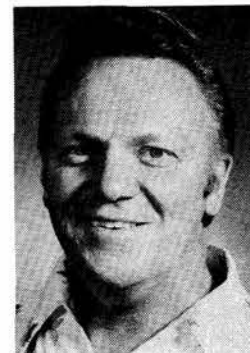
One-Week Tour of Duty

DOs serve for one week on a rotational basis; tours of duty begin on Monday morning at 8 a. m. and end the following Monday at the same time. To ensure they can always be contacted, they must be near a telephone at all times or have in their possession a pager or cellular phone (in their personal vehicle).

Based on information from Security, the DO decides whether or not to activate the Emergency Operations Center (EOC) in Bldg. 801. If the EOC is activated, the DO contacts a person from the "primary pool" of Crisis Managers (President, EVP 30, VP 3000, or VP 7000) to direct EOC activities. The DO knows which of these managers are available at the time and decides which one has responsibilities that best fit the nature of the emergency; that person is the first contact.

So who are these people that make the critical decisions at the beginning of a serious incident? Current DOs are: Bob Wilde (3430), Lou Roper (7810), Ward Hunnicutt (7800), Herb Pitts (3100), Ken Harper (7840), Bill Burnett (3310), and Jim Martin (3400).

Death



Jim Fjelseth of B61-6, 7,8/W80-0,1 Division 5111 died suddenly Aug. 25. He was 50 years old.

He had been at Sandia since June 1958. He is survived by a son and a daughter.

Albuquerque's Problems: Our Problems

Jane is abusing her unborn baby. She thinks she's only having a few cocktails to relax and unwind after a long day of coping with a hyperactive two-year-old and housework.

Mary is taking care of herself for the sake of her unborn baby by exercising, eating the right foods, and seeing her obstetrician regularly. She doesn't see any harm in celebrating her best friend's wedding with champagne.

Alice has been drinking since she was 12 years old. Now she's pregnant with her third child and it's hard to get up in the morning. The first shot of the day opens her eyes and gets rid of the shakiness she feels. She needs another at 10 a.m. so she can rest while the kids are down for a nap. At 1 p.m. she takes another sip while she watches her favorite soap opera. Other furtive sips throughout the day and evening get her through until bedtime.

Each of these expectant mothers would be horrified if accused of abusing her baby. But each woman's baby is in danger of acquiring fetal alcohol syndrome (FAS).

FAS is a combination of physical and mental birth defects that develop when expectant mothers drink excessive amounts of alcohol. Some women who drink heavily throughout pregnancy have children with no signs of FAS. Some who drink sparingly have babies with alcohol-related damage. There is currently no way to predict which babies will be damaged by alcohol.

That's because researchers don't know how alcohol causes damage to the fetus. They do know that alcohol passes directly through the placenta to a fetus soon after being consumed by the mother. When a pregnant woman takes a drink — a sip of beer, wine,



or hard liquor — her baby takes a drink too. But the baby's dose is stronger because the baby is so much smaller.

FAS is the No. 1 birth defect in New Mexico.

Babies born with FAS are abnormally small at birth and do not catch up as they get older. In most cases they have small, widely spaced eyes; a short, upturned nose; and small, flat cheeks. They may suffer from a variety of organ malformations, particularly of the heart. Most FAS babies have small brains and some degree of mental retardation. Many are poorly coordinated, have short attention spans, and exhibit behavioral problems.

Alcohol in the Community

A careful look at the statistical evidence leads to one conclusion: The big problems in our community are related to alcohol and/or drug abuse. People of all ages abuse drugs and alcohol, and this abuse affects their families and the community, from the innocent, silent victim of alcohol abuse — an unborn baby — to troubled teenagers and sick adults and those who love them, live with them, work with them, or only live next door. Homes are broken, spouses and children are abused, property is damaged or stolen, and people are killed by drunk drivers.

Here are some of the problems our community faces, all of which grow, directly or indirectly, out of alcohol or drug abuse.

- New Mexico leads the nation in drug- and alcohol-related deaths and diseases.
- New Mexico's No. 1 birth defect is fetal alcohol syndrome.

- It's estimated that there are 30,000 problem drinkers in Bernalillo County.
- Almost 700 minors were arrested in Albuquerque in 1985 for drug and alcohol offenses (DWI).
- One in four junior and senior high school students drinks regularly (75 percent of these also smoke marijuana). Possible, if not probable, corollaries to this statistic:
 - > Albuquerque's juvenile crime rate increased an average of nine percent per year over the last two years.
 - > APD estimates that 20 percent of all reported crimes in Albuquerque are committed by juveniles.
 - > Fifteen percent of all high school graduates cannot read beyond the sixth-grade level.
- Twenty-four thousand kids in Albuquerque live in one-parent homes. (One out of four of these children won't graduate from high school.)
- Last year, an estimated 3650 children in Bernalillo County were severely physically and/or sexually abused.
- Suicide is the second leading cause of death for New Mexico's youth (a rate double the national average).

These statistics characterize a community very different from that portrayed by its promoters. But it's *our* community. It touches us all in one way or another. Even when we aren't directly involved, it seems we all know someone affected by one or more of these problems. Problems such as alcoholism and drug abuse lead to others.

But, as a community, we are also connected to an organization that does something about these problems. United Way agencies work with each other to help treat the problems related to alcoholism and family problems.

Every year United Way volunteers spend more than 4000 hours looking at what people in Greater Albuquerque need and what programs and services can do the most to help. United Way has information and referral services to direct those in need to the agencies that can provide the most help.

The United Way serves one in four people in Greater Albuquerque through its 43 member agencies and 75 programs. More than 300 additional programs throughout New Mexico also receive funding through the Donor Option Program.

Here are some United Way agencies and the problems they handle:

- Last year, the National Council on Alcoholism evaluated approximately 300 DWI offenders per month for diagnosis of alcoholism (approximately 180 who wouldn't have otherwise received help were referred for alcohol treatment programs).
- In 1985, 470 families, couples, or individuals were counseled at Family and Children's Services, Inc., for alcohol/drug-related problems.
- Eighty to eighty-five percent of adult victims helped by the Albuquerque Shelter for Victims of Domestic Violence last year came from households where substance abuse is a serious threat (1200 battered women and children received emergency shelter and counseling).
- Catholic Social Services reports that 30 percent of the people it counseled in 1985 had alcohol-or drug-related problems.
- Ninety percent of the kids helped by Hogares last year used drugs or alcohol.
- At Youth Development, Inc., United Way funds helped employ 200 "high risk" young people — and, in the bargain, provided home maintenance, repair, and minor yard work to 500 senior citizens last year.
- Villa Santa Maria sheltered 25 boys (106 "teens-in-crisis" were served in residential programs).
- The New Mexico Council on Crime and Delinquency worked on legislative and advocacy issues for troubled youth.

As the Employee Contribution Plan campaign approaches, Sandians once again need to look — with an enlightened eye — at the community of which they're a part. It needs help. ECP is an efficient way to provide that help. ●JW

Events Calendar

Sept. 11-20 — Exhibit, "Raymond Jonson: The Fifties," 37th Annual Summer Exhibition; 10 a.m.-5 p.m. Tues.-Fri., 1-5 p.m. Sat. & Sun.; Jonson Gallery, 277-4967.

Sept. 11-20 — Exhibit, Clinton Adams retrospective; 10 a.m.-5 p.m. & 7-10 p.m. Tues.-Fri., 1-5 p.m. Sat. & Sun.; upper gallery, UNM Art Museum, 277-4001.

Sept. 11-20 — "Confusions," five interlinked one-act plays about human eccentricities; 8:30 p.m., Corrales Adobe Theatre, 898-3323.

Sept. 11-27 — New Mexico State Fair, State Fairgrounds, 265-1791.

Sept. 11-27 — NM State Fair Professional Fine Art Exhibit, annual juried exhibition during the State Fair; 9 a.m.-9 p.m., Fine Arts Gallery, NM State Fairgrounds, free, 265-1791.

Sept. 11-29 — Exhibit, Storytellers by Ramus Suina of Cochiti Pueblo; 9 a.m.-6 p.m., Gallery, Indian Pueblo Cultural Center, 843-7270.

Sept. 11-30 — "Shenandoah," sentimental musical about the Civil War, Albuquerque Civic Light Opera Association; 8:15 p.m. Fri. & Sat., 2:15 p.m. Sun.; Popejoy Hall, 345-6577 or 277-3121.

Sept. 11-Oct. 4 — Focus Photo Series: Ted Kuykendall Photographs; 10 a.m.-5 p.m. Tues.-Fri., 1-5 p.m. Sat. & Sun.; Albuquerque Museum, 243-7255 or 242-4600.

Sept. 11-Oct. 19 — Exhibit, "From the Center Place: Contemporary Zuni Pottery and Its Makers"; 9 a.m.-4 p.m. Mon.-Fri., 10 a.m.-4 p.m. Sat.; Maxwell Museum of Anthropology, 277-4404.

Sept. 11-Nov. 1 — Exhibit, "The African Desert: Photography by Bernard Plossu"; 11 a.m.-5 p.m. Tues.-Fri., 1-5 p.m. Sat. & Sun.; Albuquerque Museum, 242-7255.

Sept. 12 — Keller Hall Series: recital by Leonard Felberg on violin and Arlette Felberg on piano; 8:15 p.m., Keller Hall, 277-4402.

Sept. 13 — Canterbury Concert Series: "The English Connection," harpsichord music by Handel, Bach, Byrd, and Finger; 4 p.m., St. Thomas of Canterbury Church (425 University NE), 247-2515.

Sept. 13 — "Sounds of the Homeland," presented by Wunschkonzert, radio and press dance featuring German music; 4-8 p.m., Rio Rancho Inn, 294-3735.

Sept. 16-20 — "Nuevo Mexico Si!" musical travelogue of New Mexico history presented by La Compania de Teatro de Albuquerque; 8 p.m., KiMo Theatre, 242-7929.

Sept. 18-Oct. 4 — "Light Up the Sky," Moss Hart comedy; 8 p.m. Wed.-Fri., 6 & 9 p.m. Sat., 2 p.m. Sun.; Albuquerque Little Theatre, 242-4750.

Sept. 19 — "Introduction to Clogging," New Mexico Clogging Association; 7-8:30 p.m., St. Paul's United Methodist Church (9500 Constitution NE), free, 296-0453.

Sept. 19 — San Jose Feast Day: Buffalo, Corn, and Eagle Dances; Laguna Pueblo, 843-7270.

Sept. 21 — "Momix," modern dance blending movement and theatrical illusion; 8 p.m., KiMo Theatre, 848-1374.



THE SECRETARY OF DEFENSE
WASHINGTON, THE DISTRICT OF COLUMBIA

13 JUL 1987

Mr. James E. Olson
Chairman of the Board and
Chief Executive Officer
American Telephone and Telegraph
295 North Maple Avenue
Basking Ridge, New Jersey 07920

Dear Mr. Olson:

The Department of Defense gratefully acknowledges the exceptional contributions of American Telephone and Telegraph for its management of the Sandia Laboratories in the spirit of public interest. Under the outstanding leadership of AT&T, Sandia Laboratories has developed a reputation for dedication and performance in support of our national defense policy.

Sandia Laboratories' contributions to national security are well known. Its accomplishments in the critical areas of nuclear weapons engineering design and evaluation of programs which maintain the safety, reliability, and effectiveness of our nuclear stockpile reflect the fine leadership capabilities that American Telephone and Telegraph consistently displays in their management of the Laboratories.

Recently, Sandia Laboratories was asked to develop the necessary concepts and technologies for a new class of verification systems which will be essential to support our current arms control negotiations with the Soviet Union. On a very brief and demanding schedule, two scale models and a full-scale demonstration facility were completed. They have been used widely to brief officials and negotiators, including the President, members of his Cabinet, our Allies, and the Soviet negotiators in Geneva.

Our government is dedicated both to maintaining an effective and credible nuclear deterrent capability and to negotiating equitable and stabilizing arms reductions to ensure continuing peace. The Sandia efforts to allow the Defense Department to accomplish these goals demonstrate both technical excellence and a balanced sense of national priorities. We consider such an effort to be an exceptional contribution to the security of our nation.

Sincerely,
Caspar W. Weinberger

IT'S ALWAYS NICE when a respected neighbor compliments you to your parent (company, in this case). This letter from Secretary of Defense Caspar Weinberger, reprinted with James Olson's permission, points up the emerging importance of Sandia's treaty verification models, especially in light of the arms reduction talks now going on in Geneva. (It is, incidentally, the scale models that have been used for the briefings mentioned.)

Sandia Role in Geneva

Verification Technologies Expertise Vital in Arms Limitation Talks

Sandia technical expertise is playing an important role in the arms reduction negotiations now under way in Geneva. Our years of experience in treaty verification technologies put the Labs in a unique position to help U.S. negotiators hammer out treaties that not only are mutually acceptable (to the U.S. and its NATO allies and to the Soviets) but also are technically feasible.

Knowledge of what's feasible and what's not evolves directly out of Sandia's long-term R&D in verification systems for both DOE and DoD. But it also reflects the emphasis the DoD has placed over the last year on early and tangible demonstrations of ground-based (as opposed to satellite-based) technologies for monitoring the provisions of treaties currently being negotiated with the Soviets.

"That increased emphasis caused a greatly accelerated construction program here last fall to produce the demonstration facility mentioned in Secretary Weinberger's letter," says Roger Hagengruber, Vice-President of Exploratory Systems Development 9000. "It was a 'short-fuse' project that involved a special team effort by Plant Engineering and Purchasing. I think we broke all records for getting a facili-

ty of its size finished so fast."

The verification program itself is a joint engineering effort between 9000 and Defense Programs 5000—the 9000 people contribute their experience in the system engineering of verification technologies, and the 5000 people contribute their expertise in physical security and safeguards instrumentation.

"I expect the program to continue into the future as a major R&D effort, but with continuing pressure for us to construct examples of the technologies we develop," adds Roger. "And I expect our work to be a very important element of the Geneva negotiations, especially after agreements in principle are reached. That's when the teams have to agree on means to ensure that the limits they've agreed to can be verified.

"We have an ongoing presence in Geneva," Roger continues. "Stan Fraley [9111], who's been involved with this program since its beginning, is on loan to the DoD, and he's been assigned to the U.S. delegation conducting the negotiations."

A future LAB NEWS story, perhaps after the current series of arms limitation talks, will describe the verification technologies program in some detail.



James E. Olson
Chairman of the Board

550 Madison Avenue
New York, NY 10022
212 644-1000

August 13, 1987

Dear Secretary Weinberger:

Thank you for your kind letter of July 13, 1987, recognizing Sandia National Laboratories for its exceptional contributions to national defense and arms control. We are especially pleased with your expression of appreciation for the role that AT&T has played in the management of Sandia.

AT&T has managed Sandia and participated in its evolution as one of the premier government laboratories for nearly forty years. Because our contract to manage Sandia involves no fee or profit, AT&T's return on investment is the pride that we can take in the technical contributions of the Laboratories and the reputation of its staff for exceptional dedication to the public interest. Your letter was especially welcome in this respect.

AT&T is proud that Sandia reflects the highest standards in the quality of its research and development efforts and in the products resulting from such efforts. We feel that the Laboratories' active involvement, good judgment, and initiatives in the national security process exemplify our commitment to public service. Your letter gives us confidence that this commitment is reflected in Sandia's performance.

We all owe thanks to our predecessors in Government for the wisdom of their decision to use the private sector for the vital role of managing the engineering portion of the nuclear weapons program and in making it possible to utilize private sector policies and practices in that role. In large measure, we believe Sandia's success comes from this pattern of operation.

We look forward to continuing this relationship on the same basis that has proved so effective in the past.

Sincerely,

Chairman of the Board

The Honorable Caspar W. Weinberger
Secretary of Defense
Department of Defense
The Pentagon, Room 3E-880
Washington, DC 20301-1000

"THE HIGHEST STANDARDS in the quality of its research and development efforts"—high praise indeed from AT&T for Sandia. This letter from James Olson, reprinted with his permission, also points out the unique "no fee or profit" contract under which AT&T has managed Sandia for nearly 40 years; the parent companies of all other members of the Nuclear Weapon Complex receive fees of some sort for their management roles.

AT&T Savings Plans

The following are the Earnings Factors for June 1987, for the AT&T Savings and Security Plan and the AT&T Savings Plan for Salaried Employees.

| | Earnings Factors |
|---|------------------|
| | June |
| SPSE (Savings Plan for Salaried Employees) | |
| AT&T Shares | 1.0853 |
| Government Obligations | 1.0095 |
| Equity Portfolio | 1.0548 |
| Guaranteed Interest Fund | 1.0075 |
| Diversified Telephone Portfolio | |
| Unrealized Appreciation | 1.0562 |
| Realized Appreciation | .0092* |
| SSP (Savings and Security Plan — Non-Salaried Employees) | |
| AT&T Shares | 1.0848 |
| Guaranteed Interest Fund | 1.0077 |
| Diversified Telephone Portfolio | |
| Unrealized Appreciation | 1.0549 |
| Realized Appreciation | .0097* |

* The 1 has been removed from the earnings factor. Current month's DTP earnings may be calculated directly: Earnings Factor x DTP Current Worth = Current Month's Earnings.



If You Walk Often

You Don't Have to Walk Tall

A new Gallup survey, conducted for *American Health* magazine, shows that two out of three active Americans use walking as their primary form of exercise.

Think they're onto something? It's not too late to join Sandians and DOEans in the "Feet Across

America" trek from Maine to Washington. To get a log for reporting weekly mileage, just call the TLC office on 4-8238 and request one. Last reporting date is Sept. 27.

And check the trekkers' cumulative progress from mountaintop to mountaintop on the maps in the lobbies of the Cafeteria, Bldg. 802, and Bldg. 822; in the vending area of Bldg. 880; in the waiting room at Medical; and in T-13.



Walk the Duke City

Don't forget the "director challenge" during the Duke City Marathon on Sept. 27. Both the half-marathon and the 5K event are open to walkers as well as runners.

Pick up registration forms in Medical. Duke City registration is by mail only; deadline is Sept. 21. To be counted for your organization, log in when you pick up your form.

TLC will calculate per capita participation. The winning directorate will be announced in the Oct. 9 LAB NEWS.

Fun & Games

Golf — The Sandia Men's "A" Scratch Golf League playoff was held at UNM South on Aug. 28. Winners were Phil Fagan (123), Ned Underhill (3716), and DuWayne Branscombe (2152). It was a three-man scramble format against two other teams, each of which won one round of the tournament. The winners were five under on the front nine, with the runners-up four and three under, respectively.

Softball — Org. 1800 had a summer round-robin in softball tournament on Aug. 22 at the Air Guard fields. Three teams from Depts. 1810, 1820, 1830, and 1840 were organized by Larry Salgado (1811), Rick Lujan (1822), Jerry Rejent (1833), Eddie Martinez (1832), and Joel Stevenson (1841). Winner of the tournament was a team of people from Depts. 1840 and 1820.

Volleyball — The Sandia Volleyball Association starts serving when the season opens on Oct. 5. Deadline for team applications is Sept. 16. Sandians and dependents over 16 are eligible to join. DOE employees, approved DOE and Sandia contractors, and their dependents are also eligible, but must pay the yearly SERP membership fee of \$14.30. Members from the military must be members of the Coronado Club and SERP. Interested players should contact Fred Gunckel (2545) on 6-7235, Edwina Kiro (1270) on 4-7662, or Jose Rodriguez (5249) on

4-0021, so they can be contacted by teams needing players. Contact Stan Ford on 4-8486 for team packet information.

Boating — The Coast Guard Auxiliary is once again offering Boating Safety courses in both power and sailboating. Classes begin Sept. 16 at 7 p.m. at the Armed Forces Reserve Center (400 Wyoming NE). Both courses will be held on Wednesdays for 13 weeks. Instruction is free, but \$10/family will be charged for the course text. Additional family members will be charged \$3 for course work sheets. To preregister, call Ben Gardiner on 298-0116 or Earl Livingston on 298-5926.

Flying — Rides Day at the Kirtland Aero Club is Sept. 19 from 10 a.m. to 5 p.m. Bring the family. Plane rides for adults are \$7, children \$5. Free hot dogs and soft drinks, plus door prizes are included. September is Membership Drive Month. Initiation fee for new members is cut from \$50 to \$25. Register to win four hours with a flight instructor in a Cessna 172; the time can be applied to biannual flight review, recurrency, check out, or first student solo cross-country flight. Entry forms are available at Club Headquarters, Hanger 482, KAFB. Club membership is open to Sandia and DOE employees and dependents, and contractors. Call Jack Cochran on 4-0884 or 242-4184 for more information.

Supervisory Appointments

DANIEL AESCHLIMAN (DMTS) to supervisor of Experimental Aerodynamics Division 1554, effective July 16.

Dan joined the Labs in October 1967 as a member of the Aerodynamics Research Division. From 1968 to 1978 he worked in the Fluids Research and Laser Research Departments in the development and application of diagnostic techniques for plasma, laser, and combustion flows. He joined the Safety Assurance Studies Division in 1978 and the Enhanced Oil Recovery (EOR) Division in 1980, where he was involved in research to improve the efficiency of EOR using steam injection. His work on wellbore refluxing was listed as one of the "Top 100 Innovations of the Year" by *Science Digest* in 1985.

He has a BS in aero engineering from Wichita State University and a PhD in fluid physics from Northwestern. He did post-doctoral work at the von Karman Institute for Fluid Dynamics in Brussels, Belgium. He is a member of the American Physical Society, the Society of Petroleum Engineers, and the American Institute of Aeronautics and Astronautics.

In his spare time Dan enjoys skiing, carpentry, reading, and hiking and camping with his family. He and his wife Wendy have two sons. They live near Tijeras.

* * *

ERIC REECE to supervisor of Mechanical Design Division 9143, effective Aug. 1.

Eric joined Sandia's Technical Development Program in June 1964 as a member of the Experimental Aerodynamics Division. He worked in the Terradynamics Division from 1967 to 1976, developing air-delivered sensors and investigating the use of penetrators as planetary probes. From 1970 to 1971, he was assigned to the Defense Special Projects Group in Washington, D.C. He joined the Geo Energy Department in 1977, where he worked on the development of seafloor instrumentation packages. Eric left Sandia for a year in 1981 to privately market a gas-well fracturing process. He returned to the Labs in 1982 as a member of the Access Denial Technology Division. In 1984 Eric moved to the Advanced Systems Development Division, where he studied kinetic energy lethality for SDI.

He has a BS in aerospace engineering from Georgia Tech and an MS in mechanical engineering from UNM.

Eric likes to read and play tennis in his spare time. He and his wife Jeanne have two daughters and live in the NE Heights.

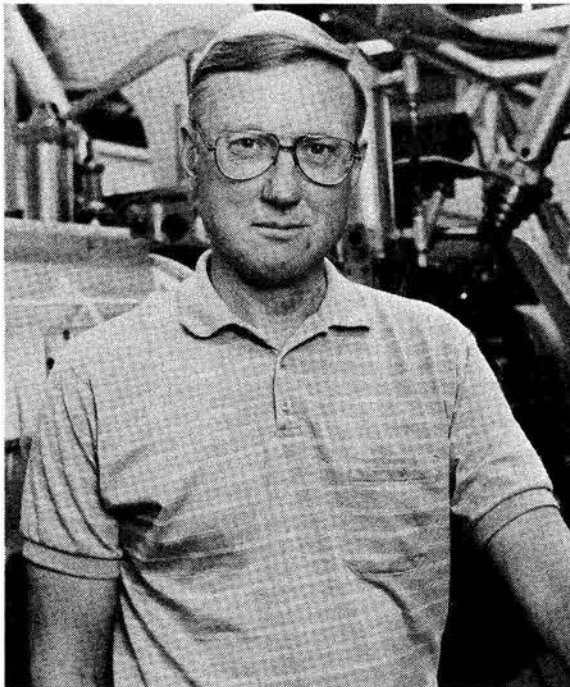
* * *



ERIC REECE (9143)

LARRY AZEVEDO to supervisor of Physical Standards Division 7241, effective Aug. 1.

Larry joined Sandia in October 1977 as a member of the Solid State Theory Division, where he did post-doctoral experimental work. In 1978, he became a staff member in the Chemical Physics Division, doing research in solid state physics on organic metals.



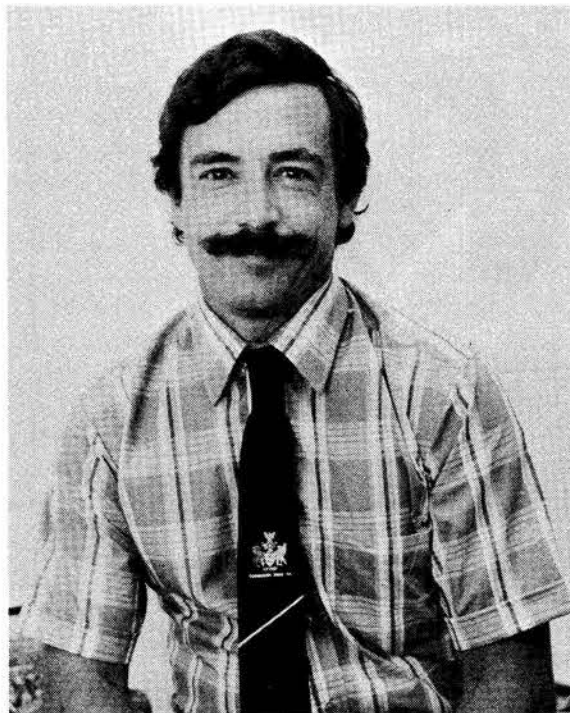
DAN AESCHLIMAN (1554)

He has a BS from MIT and an MS and PhD from UCLA, all in physics. Larry was an adjunct professor in physics at UCLA for two years before coming to Sandia. He is a member of the American Physical Society.

In his spare time, Larry coaches soccer. Last January he was named National Youth Soccer Coach of the Year by both the National Soccer Coaches Association of America and the U.S. Youth Soccer Association.

Larry and his wife Lorna have two children and live in the NE Heights.

* * *



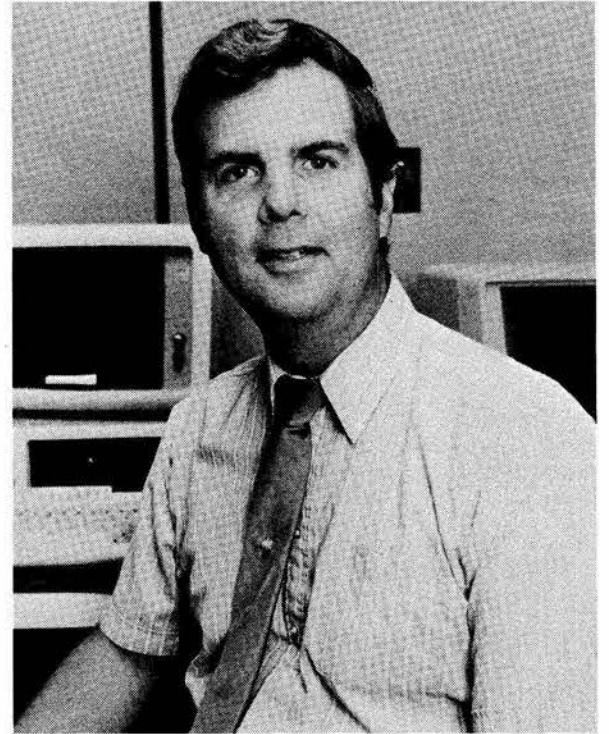
LARRY AZEVEDO (7241)

MICHAEL BLACKLEDGE to supervisor of Software Quality Assurance Division 7254, effective Aug. 16.

Mike joined the Labs in August 1983 as a member of the Computer-Aided Design Integration Division and became a member of the Computer-Aided Design Technology Division 2814 when it was formed. Mike's work includes initiation and development of the five-volume *Sandia Software Guidelines* currently being published. He represented Sandia on the American National Standards Institute (ANSI) group to study requirements and make recommendations for data interchange standards. He is currently vice-chair of the technical committee ANSI created to establish U.S. standards in this area. Mike also developed the INTEC course, "Software Development Techniques for Quality."

He has a BS in mathematics from the U.S. Naval Academy and an MS in mathematics from North Carolina State University. Before coming to Sandia, Mike spent 20 years with the U.S. Air Force, working in various software-related positions. He is a member of the Computer Society of the IEEE.

Mike's outside interests include family activities and coaching youth soccer. He and his wife Helen have two sons and live in the NE Heights.



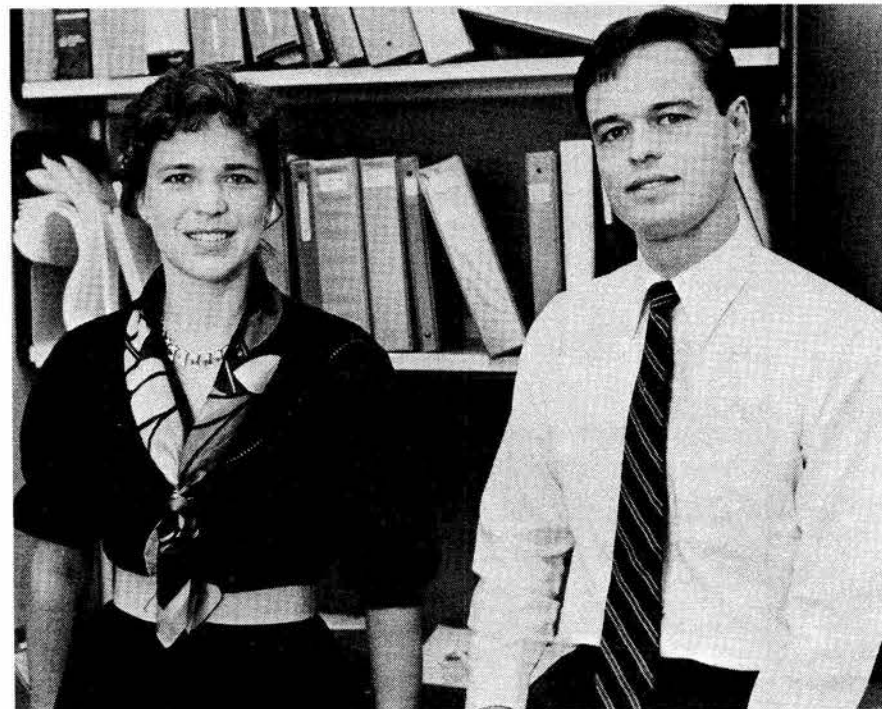
MIKE BLACKLEDGE (7254)

Congratulations

To Linda and Hal (1521) Morgan, a son, James Riggins, Aug. 14.

To Peggy (2621) and David Schlesinger, a son, Jason David, Aug. 15.

To Jill Padst (2575) and Jeff Miller (1534), married in Albuquerque, Aug. 22.

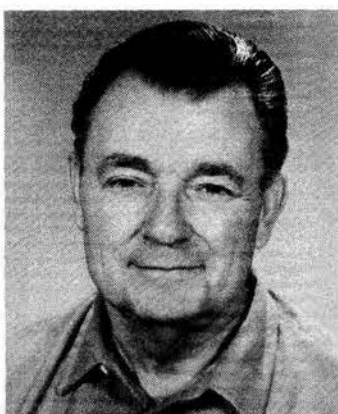


CHARLENE "CHUCK" WIUFF (formerly 131) and Chuck Duus (formerly 133) transferred on Sept. 1 to AT&T-Greensboro (N.C.) to participate in AT&T's Corporate Audit Program for Professional Development (CAPP). Participants in CAPP — a two-year management career development program — work in AT&T's internal audit group and take specialized training courses. Upon successful completion of CAPP, they could end up at any of the AT&T locations and are considered eligible for promotion to supervision.

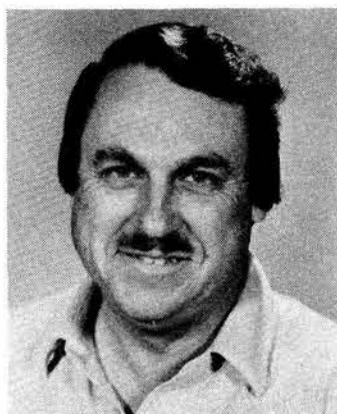
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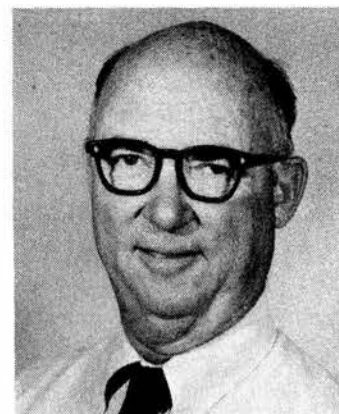
SEPTEMBER 1987



Curtis Warthen (5141) 30



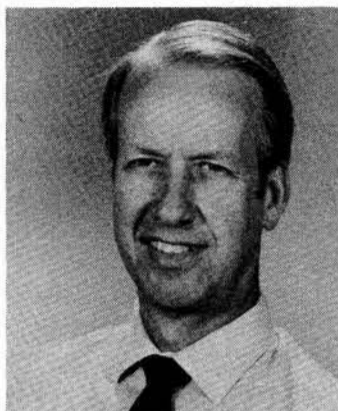
Norman Corlis (5146) 25



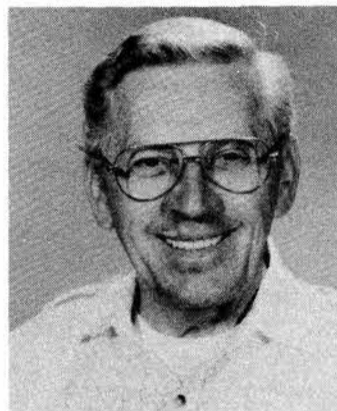
Barry Butcher (400) 25



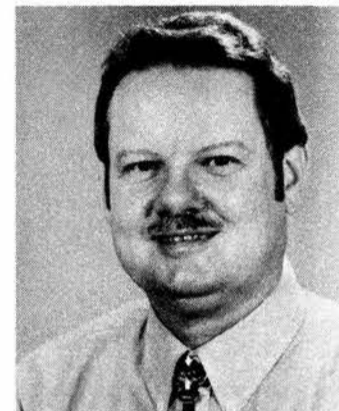
Angie Gurule (3152) 35



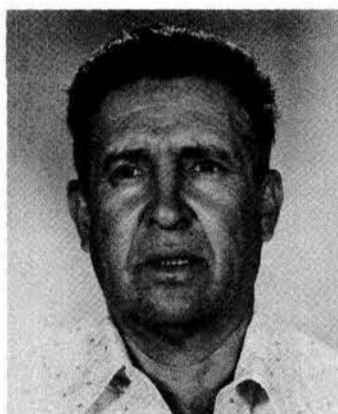
Milton Clauser (1261) 20



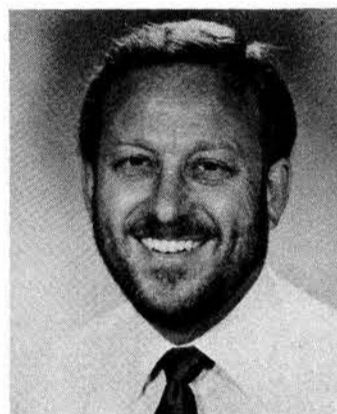
Richard Zaluga (2522) 35



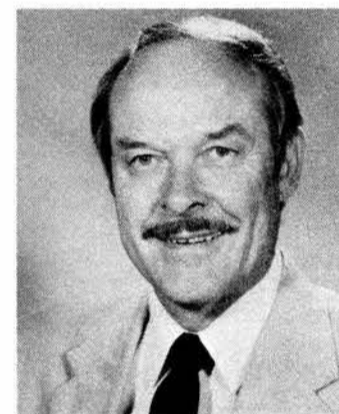
Curtis Mueller (7232) 25



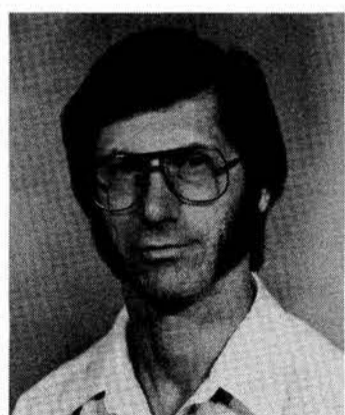
Francisco Sanchez (7818) 15



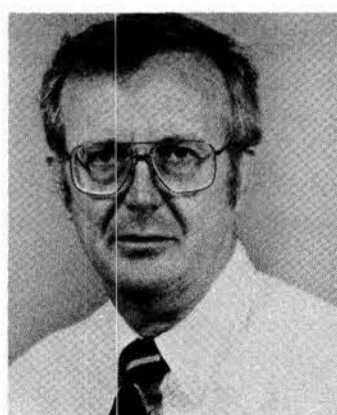
David Schafer (7531) 25



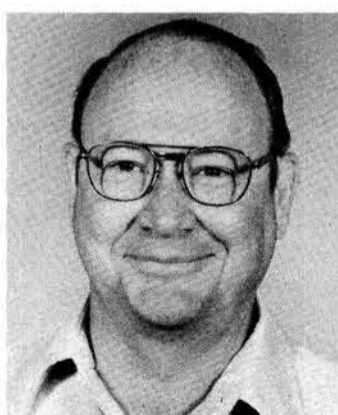
Kenneth Flynn (7262) 30



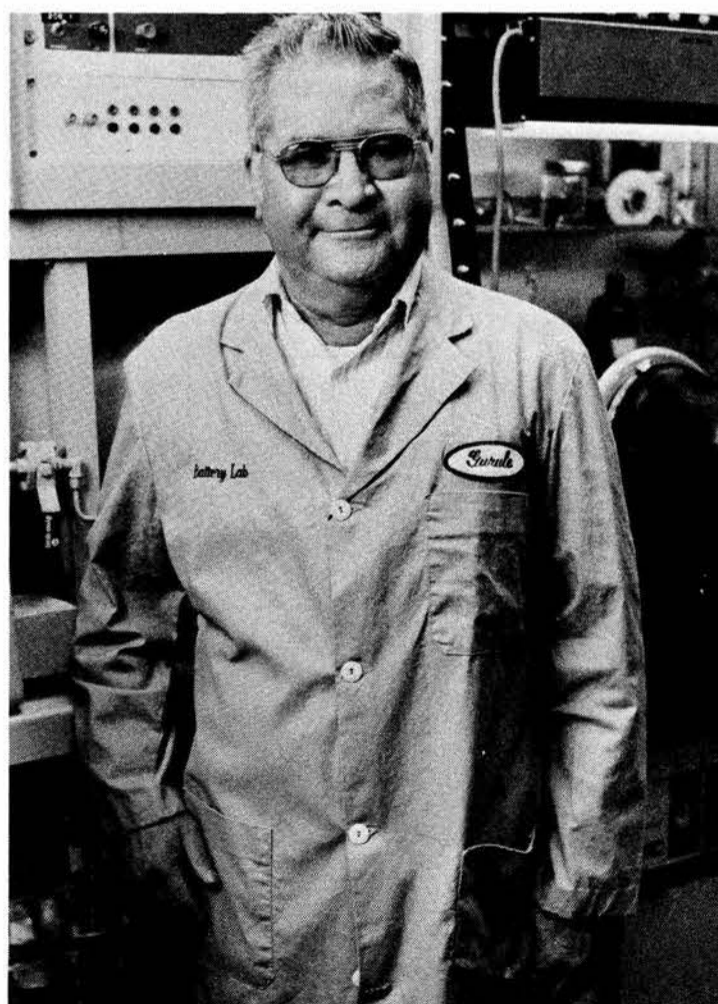
Bill Andrzejewski (2512) 20



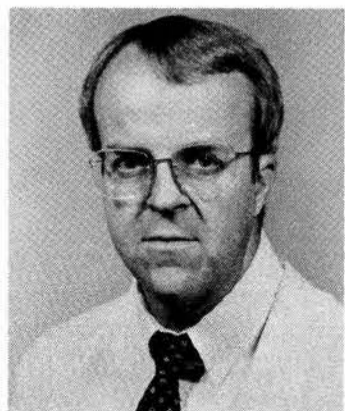
Pat Murphy (6000) 20



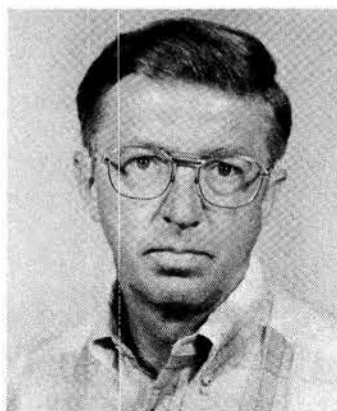
O'Neill Burchett (7551) 20



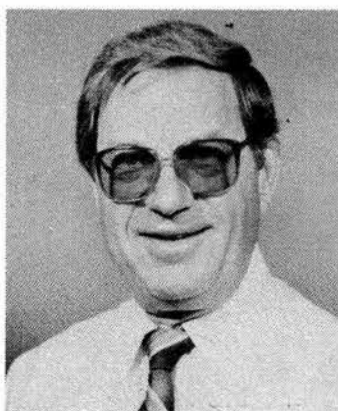
Frank Gurule (2523) 25



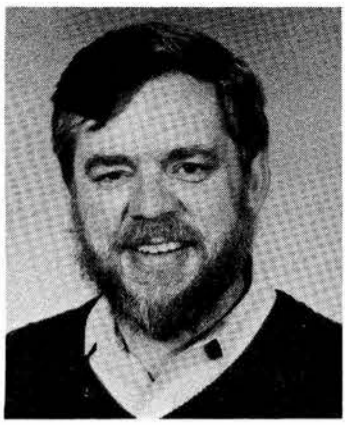
Bob Easterling (7223) 20



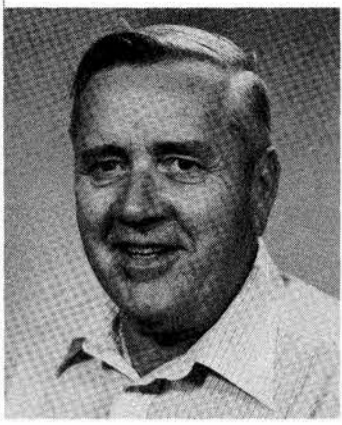
Dean Wolf (9112) 15



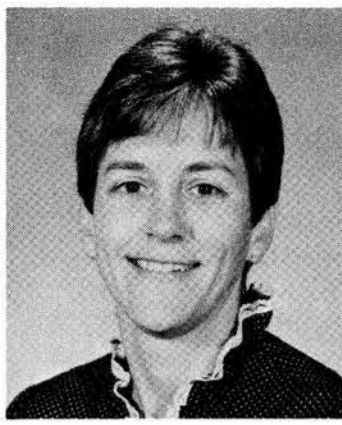
J. D. Jones (5122) 30



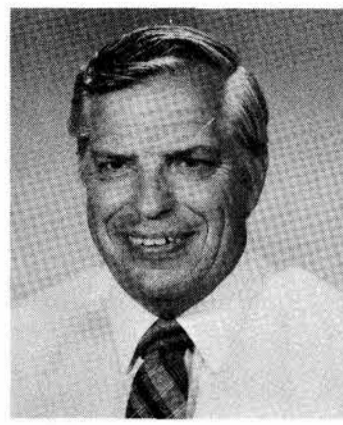
Melvin Olman (2614) 20



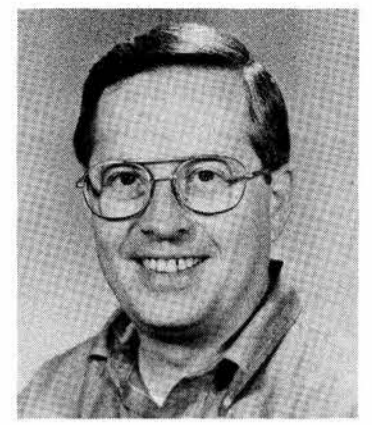
Vern Brewster (7137) 40



Linda Erickson (3144) 10



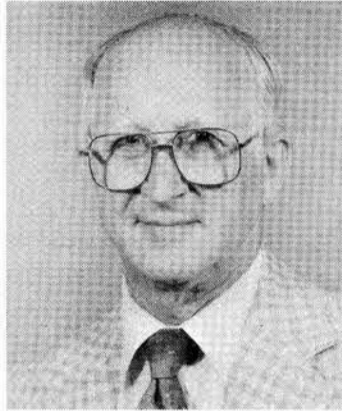
Andy Wilken (9144) 30



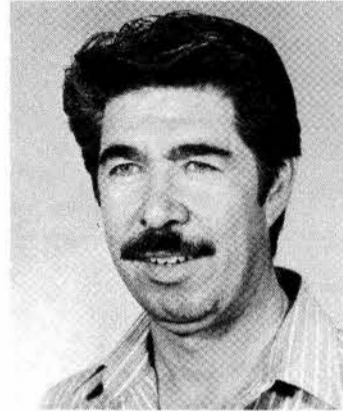
Peter Chauvet (2857) 10



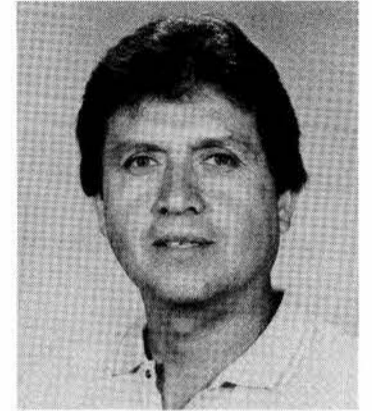
Heinz Schmitt (5100) 25



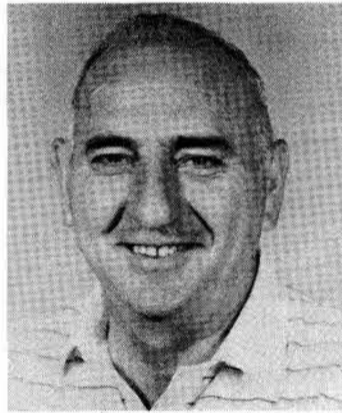
David Weingarten (2566) 30



Tony Marquez (7473) 15



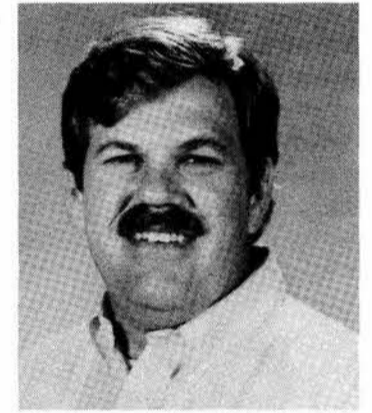
Ernest Padilla (2832) 10



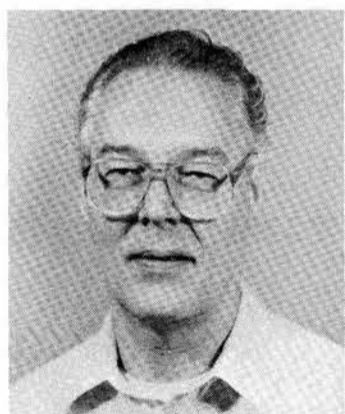
Lawrence Kent (7537) 30



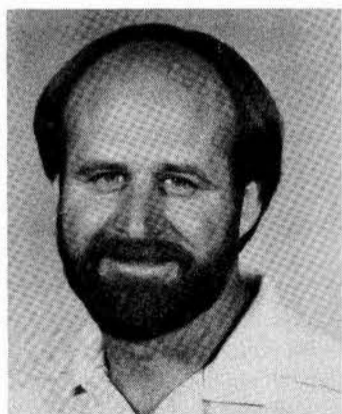
Marcella Madsen (6323) 25



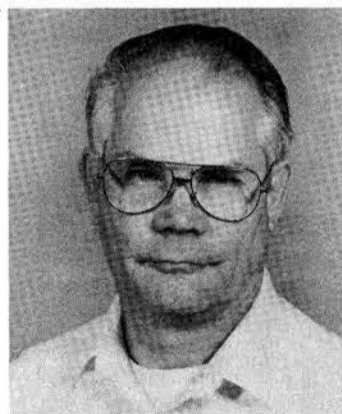
Tom Carne (7544) 10



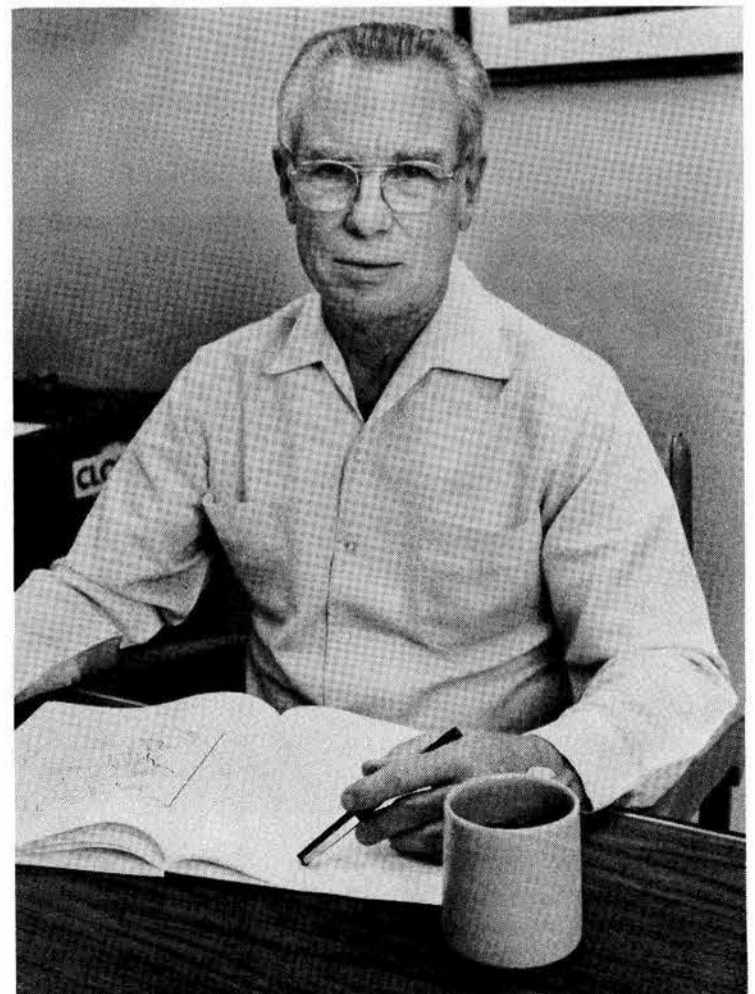
Dusty Cravens (5251) 30



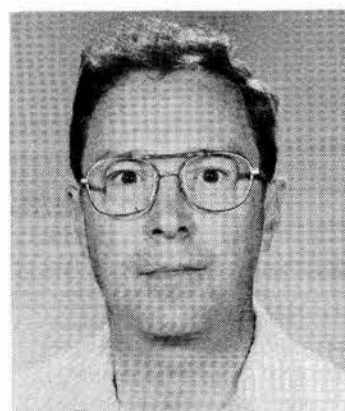
Patrick Horton (5212) 10



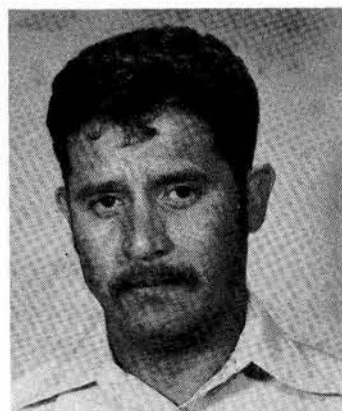
Ken Shrock (9144) 30



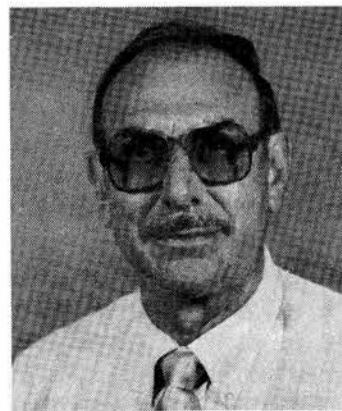
Carter Broyles (7100) 35



Thomas Bergstresser (1531) 10



Ramon Villegas (7126) 15



Don Jerome (3432) 10

Attention: All Artists

'Tis the season when the LAB NEWS staff thinks about the cover of the Christmas issue, which will be published on Dec. 18.

As in the past, we're asking artist-readers out there to submit original paintings — appropriate for the season — in any medium, that could be reproduced for the Christmas cover. Entry dead-

line is Oct. 23, so we can start the selection process at that time.

Please bring your potential cover to the LAB NEWS office, Bldg. 814. All art submitted for consideration will be returned to owners, though we'll need to retain the winning entry until the Christmas issue is published.

Sympathy

To Robert Zamora (7818) on the death of his father in Estancia, Aug. 22.

To Jim Hoffman (1235) on the death of his mother in Cincinnati, Ohio, Aug. 22.

To Paul Lemke (2642) on the death of his son in Corrales, Aug. 23.

To Fred Schkade (2614) on the death of his mother in Texas City, Tex., Aug. 27.

To Jose Barela (7473) on the death of his brother in Albuquerque, Aug. 28.

UNCLASSIFIED ADVERTISEMENTS • UNCLASSIFIED ADVERTISEMENTS • UNCLASSIFIED ADVERTISEMENTS • UNCLASSIFIED ADVERTISEMENTS

Deadline: Friday noon before week of publication unless changed by holiday. Mail to Div. 3162.

Ad Rules

1. Limit 20 words, including last name and home phone.
2. Include organization and full name with each ad submission.
3. Submit each ad in writing. No phone-ins.
4. Use 8 1/2 by 11-inch paper.
5. Use separate sheet for each ad category.
6. Type or print ads legibly; use only accepted abbreviations.
7. One ad per category per issue.
8. No more than two insertions of same ad.
9. No "For Rent" ads except for employees on temporary assignment.
10. No commercial ads.
11. For active and retired Sandians and DOE employees.
12. Housing listed for sale is available for occupancy without regard to race, creed, color, or national origin.

MISCELLANEOUS

RADIAL DRILL PRESS, Sears, 1/2" chuck, 1/4-hp motor, \$60. Allen, 296-6453.

TRUMPET, w/case and music stand, \$225; color TV, 25", console, \$85. Benson, 296-4282.

TABLE SAW, 8", Atlas, 3/4-hp motor, dado cutters, sanding disk, extra blades, \$50; audio amplifier, 15-watt, \$20. Hughes, 299-6674.

CHILD'S HIGH CHAIR, \$20; rocking horse, \$15; hardwood rocker, \$20; white wooden crib, \$35; Gerry backpack child carrier, \$5. Reid, 268-6506.

TRS-80 COMPUTER, 64K, w/expanded BASIC, tape recorder, voice synthesizer, assembler "Z"-pak, includes all books, \$100. Craig, 869-6513.

ELECTRIC TYPEWRITER, Royal Medallion II, power return, \$60. Chorley, 296-1454.

OBOES: student Signet, \$300; professional Lorée. Blotner, 298-9459.

MINIATURE VICTORIAN HOUSE, 21" x 47" x 40", 2 stairways, 10 rooms, finished w/furniture, \$150 (kit cost). Burnett, 298-1078.

TRUCK SEAT, \$15; 4 wheels, 5-hole, 16", \$10/ea.; 4 hubcaps, 16 Ford, \$10/ea. Eisenberger, 877-7041.

FIFTH-WHEEL TRAILER, '83 model, NU-WA. Manning, 243-7124.

MUSTANG RIDER LAWN MOWER, 5-hp, \$165. Cibicki, 877-7098.

CLARINET, Martin Frères, \$35. Nielsen, 299-6740.

LAWN MOWER, rear-bagger, 4-hp, '86 model, \$150; side-discharge mower, \$25. Hayes, 299-1200.

VIOLIN, Roth, full-size, \$350. Kissam, 881-2895.

SUBARU LOUVRES, \$20; Laser car mask, \$20; kitchen table/chairs, \$20. Salgado, 291-9460, leave message.

ARMSTRONG FLUTE, \$150. Bronkema, 821-2119.

INFANT STROLLER, w/umbrella (blue jean material), \$12. Burkinshaw, 293-7563.

COCKATIEL, yellow head and tail, gray and white body, not trained, cage and stand included, \$30. Hogan, 898-7990.

REFRIGERATOR, avocado, 16-cu.-ft., 6 yrs. old, \$150; woman's standard

bicycle, 26", \$20. West, 292-7091.

CHILD'S ROLLTOP DESK, solid maple, 80 yrs. old, w/swivel chair, \$150. Mathey, 345-6312.

TWO TWIN-SIZE RANCH OAK BEDS, headboards and footboards, one set of mattresses, \$100/ea. bed. Kmatz, 299-5978.

GAS DRYER, \$30; canvas cartop carrier, \$10; manual typewriter, \$10. Drayer, 821-4017.

LUGGAGE: Samsonite Concord, blue, 26", w/wheels, \$40; 24" Pullman, \$30. Lewin, 898-2303.

PUPPIES: AKC miniature schnauzer, championship background, family-raised, 7 weeks old, available now. Stoever, 296-3717.

TRUMPET, Bundy, \$120. Cook, 296-3064.

HOT TUB, 4-person, 110 VAC, complete, \$1400; Yashica Electro 35mm camera, \$25; '67 Shasta travel trailer, 16', self-contained, \$1700. Hudson, 255-8385.

ANTIQUA WALL TELEPHONE, \$200; wagon wheels, \$30/ea.; walking plow, \$30; windmill pump, \$40; other items available. Sheaffer, 255-9473.

FRONT TOP for Suzuki Samurai convertible, new, \$40. Clark, 292-1495.

TWO SPEAKERS, Superscope model S-208A, 8-ohm, 30-watt, \$15/ea.; Sony radio/phonograph/8-track cassette player, \$15; Clarion AM/FM car radio, \$10; all OBO. Homer, 836-5043.

CONTEMPORARY DINING ROOM SET, china cabinet, and hutch, pecan finish, Herculon brown plaid seat covers, captain's chairs, \$475. Brosseau, 836-7329.

DARK WOOD END TABLE, w/closed storage, \$25; Everlast exercise punching bag, heavy canvas, 70 lbs., \$40. Dunlap, 884-0232.

TWO GOODYEAR MH TIRES, 8-19.5, some tread. Brooks, 299-1884.

PORTABLE TV, GE, color, 17", new picture tube, \$175. Vasquez, 881-1265.

SOFA SLEEPER, Simmons queen-size innerspring, brown floral pattern, throw pillows, \$275. Beckmann, 296-1829.

KING-SIZE WATER BED, waveless mattress, padded rails, 2 sets of sheets and pillow cases, \$350. Caton, 294-4490.

FINISHING SANDER, Black & Decker 7410, 3-5/8" x 9" paper, 4000 orbits/min., burnout-protected motor, used on one project, \$20. Schkade, 292-5126.

DROP-LEAF KITCHEN TABLE, 4-piece sectional sofa; 40" round, white marble coffee table; sofa-sized oil painting, other items. Orrell, 299-2300.

FREEZER, 12-cu.-ft., Sears, \$250; recliner, \$40; trampoline, \$35; maple lamp table, 28" diam., \$50. Tedesco, 888-1068.

WOMAN'S LEATHER COAT, brown, 3/4-length, size 10, \$80; 5-piece sectional sofa, turquoise and gold tweed, \$110. Gaither, 298-1043.

SEARS WASHER AND GAS DRYER, coppertone, \$75/ea. or \$125/both. Linnerooth, 299-6558.

BLOCK GARAGE SALE ITEMS: furniture, car, bikes, camper, tools, wood stove, more, Sept. 12, 8 a.m.-5 p.m., 1900-2100 blocks on Father Sky NE (Tramway to Rover, east to Father Sky). Gollhofer, 883-7844.

LEAN MACHINE RESISTANCE EXERCISER, 50 different exercises, 200-lb. resistance, cost \$700, sell for \$400 OBO. Babb, 296-7955.

LAMP/TABLE COMBINATION, pine wood, stained soft brown, w/shade,

\$55. Johnson, 296-1917.

INFANT KNAPSACK, used 3 months, was \$40, asking \$25; walker, \$10; infant carrier w/pad, \$5; unused cloth diapers. Schofield, 292-7220.

POODLES: male & female, 1 apricot, 1 white, 8 weeks old, \$125. Sanchez, 836-0348.

WHIRLPOOL WASHER & DRYER, \$195; exercise bike, \$45; dark pine twin-size headboard, \$30. McKay, 291-8478.

SHOTGUN, Remington 1100, 12-ga., 28" mod., VR, never fired, \$330; Remington Varmint BDL, 308-cal., w/20x Redfield scope. Bercaw, 275-1691.

ROCKER, 2-position, tan vinyl, \$150; cat's litter box, \$3. Zirzow, 294-7296.

COMPUTER DESK, 33" x 60", hand-crafted from red oak, w/top equipment shelves, printer, and file drawers, \$1095. Denney, 268-0004.

UPRIGHT PIANO, Hobart & Cable, dated 1912, solid oak, restored soundboard, \$500; tires: two 165x80SR13, w/rims, fit Honda CVCC & Civic, \$10/ea.; 5 Goodyear all-terrain, 33x12.50R15, 12/32 tread, \$350. Reif, 299-2665.

SHOW PIGEONS: jackabins, ice, English trumpeters, swallows. Sanchez, 255-5515.

COUCH, beige tweed, dark wood and brass trim, \$85 OBO. Zipprich, 883-7128.

FLUTE, Yamaha, model YFL-24S, w/case, \$150; Bundy student clarinet, w/case, \$150. Beard, 821-0309.

STEREO, 80W Sanyo rack system, cassette, AM/FM tuner, turntable, \$225; upholstered chair, pale green, \$35. Lagasse, 293-0385.

TRANSPORTATION

RACING BICYCLE, Raleigh Grand Prix, 59cm, red. Gubbels, 884-3982.

FIBERGLASS BOAT, 14', w/35-hp Evinrude motor, trailer, \$1495/complete. Hare, 292-2689.

BICYCLE, 10-spd., Schwinn Varsity, 24", \$60. Burnett, 298-1078.

'77 MONTE CARLO, AT, AC, power, AM/FM cassette. Daut, 255-2529 or 243-0852 evenings, 881-6291 leave message.

STRONGMAN ATB MOUNTAIN BIKE, 10-spd., used twice, \$175 OBO. Finley, 299-0045.

'54 CHEV., white, green interior, 4-dr., completely rebuilt, everything stock, \$5000. Brady, 256-9541.

'81 FORD CLUB WAGON, E-150, PS, AT, AC, cruise, 60K miles. Miller, 873-3450.

BOY'S BIKE, \$25. Benson, 296-4282.

'78 FORD FIESTA, \$750. Cibicki, 877-7098.

'82 DATSUN DIESEL PICKUP, 5-spd., long bed, w/Brahma camper shell, \$3000. Peden, 296-5844.

'85 HONDA CRX, AC, AM/FM cassette stereo, fog lights, one owner, \$6500. Lawrence, 268-5479.

'76 FORD COURIER, needs engine work. Ford, 294-6133.

'83 CHEV. 3/4-TON PICKUP, 4x4, AT, AC, PS, tilt, AM/FM stereo, new 10-ply Michelin tires, dual fuel tank (reg. gas), \$8595, would like to trade on a motorhome. Martin, 897-7660.

'75 DATSUN PICKUP, w/shell, \$1250 OBO. Bronkema, 821-2119.

'79 OLDS CUTLASS CALAIS, maroon, one owner, \$2000. Lovato, 291-9460 leave message.

HONDA CB200T, 11K miles, \$300. Mansure, 821-4898.

'84 FORD ECONOLINE 250-XL VAN, conversion, V-8, AT, AC, PS, PB, CB, AM/FM tape, tilt, cruise, dual tanks, 2 captain's chairs, sofa bed, trailer package, 18K miles, \$12,000. Wilkins, 884-5130.

GIRL'S BICYCLE, 20", high-rise seat, \$35. Cook, 296-3064.

MAN'S BICYCLE, 27", 12-spd., new back tire, \$40. Koepp, 294-7136.

'79 CADILLAC, all power, AC, \$1800. Finch, 873-2664.

'82 YAMAHA 650 TURBO, \$1200 OBO. Hudson, 255-8385.

'63 CHEV. IMPALA, 2-dr., hardtop, one owner, \$2000 OBO. Carl, 298-7136.

'80 BUICK SKYLARK LTD, 4-dr., V-6, AT, AC, 52K miles. Brooks, 299-1884.

'84 MAZDA 626 LX, 35K miles, one owner, AC, PS, cruise, 4-speaker tape, \$6500; Schwinn Typhoon bicycle, original tires, bars, seat, \$75; Schwinn 24" 3-spd., \$15. Ginn, 883-0004.

'75 CHEV. VEGA, 2-dr., 4-spd., 4-cyl., 78K miles, \$400. Fogleman, 299-5957.

'69 HONDA TRAIL 90, \$250. Fink, 292-8197.

'77 OLDS 88, Delta Royale, 2-dr., loaded, Michelin tires, \$1500 OBO. Mischke, 294-5247.

'71 FORD VAN, E-300, 8-passenger, AT, AC, new tires, brakes, radiator, \$1500 firm. Stone, 298-4641.

TWO 10-SPD. BICYCLES: boy's 27" Motobecane, \$70; girl's 24" Rampar, \$50. McMullen, 298-2801 after 6 or weekends.

'77 HONDA CVCC HATCHBACK, engine professionally rebuilt, new paint, \$1250 OBO. Furaus, 293-9799.

'85 TOYOTA CRESSIDA, fully loaded, 33K miles, \$13,000 firm. McMurtry, 881-8053.

'79 OLDS CUSTOM CRUISER WAGON, AC, all power, AM/FM cassette, 90K miles, \$1850 OBO. James, 294-6837.

'79 OLDS CUTLASS, Supreme Brougham, 75K miles, \$1200. Brower, 298-2254.

'85 DODGE D-50 PICKUP, 29K miles, 2.6-litre, 4-cyl., 5-spd., some extras, \$5299. McConnell, 831-0471.

'70 VW BUG, new tires, \$950 firm. Case, 299-0923.

'75 HONDA CIVIC, 4-spd., engine needs rebuild or replacement, \$150; woman's 3-spd. bike, \$35. Zirzow, 294-7296.

'74 MGB GT, 78K miles. Palkovic, 292-5582.

MOPED, 1.3K miles, 80 mpg, w/twin rear carrying baskets, double-lock protection system, \$125. Lagasse, 293-0385.

'85 HONDA 500 INTERCEPTOR, \$2400 OBO. Sanchez, 255-5515.

WOMAN'S BIKE, 10-spd., 26", \$50. McKay, 291-8478.

REAL ESTATE

2-BDR. MOBILE HOME, 12' x 60', Victor, 1 bath, AC, appliances, patio cover, storage shed, SE adult park, \$7800. Magnuson, 268-5955.

2.5 ACRES, wooded lot, 1.8 miles off S-14, dedicated country road, phone, electricity, \$16,900. Swahlan, 292-3598.

3-BDR. TOWNHOME, new, 1750 sq. ft., 2-1/2 baths, FP, double garage, landscaped, Montgomery/Moon area, \$89,900. Field, 298-3128 or 281-5650 after 6.

1-BDR. CONDO, near KAFB/airport/golf course, \$28,900. Bozone, 298-3328

or 242-8295.

NEW HOME on 2+ acres, 2114 sq. ft., 10 miles east of Albuquerque, no trades, must be financed, \$149,000. Redlinger, 281-5783.

2-BDR. PATIO HOME, NE, study, 2 full baths, 2-car finished garage, FP, established landscaping, 4 yrs. old, 1212 sq. ft., \$84,900. Bennett, 298-4547.

7 ACRES, east of 217 on 222, secluded, 1/2 wooded, 1/2 meadow, REC 8%, \$3750/acre. Kelton, 345-3834.

3-BDR. TOWNHOUSE, 1-3/4 baths, refrigerator, fan, miniblinds, garage door opener, landscaping, \$57,950. Trump, 298-9558.

3-BDR. HOME, storm windows, enclosed patio, 808 Palomas NE, \$20,000/down, \$226 PITI & REC, \$67,500. Staloni, 298-7903.

3-BDR. HOME, NE, paneled den, hardwood floors, built-ins, updated baths and kitchen, mature landscaping, storage house, \$81,900. Joseph, 299-6989.

3-BDR. HOME, Academy Heights, Humphrey/Eisenhower area, 1-3/4 baths, double garage, landscaping, assumable no qualifying 10% FHA loan, \$85,400. Gallegos, 292-1476.

2-BDR. MOBILE HOME, 14' x 65', 2 baths, awnings, covered deck, new carpet and AC, extras, set up in Aztec Village, \$11,500. Luikens, 881-1382.

WANTED

WHEELCHAIR, in good condition; also need 1/2- to 3/4-hp motor. Allen, 296-6453.

DOGHOUSES, large and small, good condition, reasonable. Shipley, 298-2433.

SWING SET, outdoor play equipment. Cibicki, 877-7098.

GREAT DANE PUPPIES, female, prefer registered. Burford, 1-887-0598.

BARBIE & KEN CLOTHES, in good condition. Wagner, 823-9323.

WHITE CEILING FAN, 36" or 42", 3-spd., flush mount, light kit adaptable. Hovorka, 299-0224, leave message.

HOUSEMATE, female, nonsmoker, share 3-bdr. house in Taylor Ranch, private bath, washer/dryer, \$250/mo. plus 1/3 utilities. Bassett, 897-4712.

HOUSEMATE, female or male, to rent furnished room w/bath, Juan Tabo/Central, share laundry, kitchen, \$225/mo. plus 1/2 utilities. Lambert, 294-4188.

MALE DANCE PARTNER, to take SERP beginning Country & Western dance lessons in October, will pay for lessons. Denham, 294-1590.

WORK WANTED

LAWN MOWING, Rototilling, hauling, landscaping, and general yardwork, by college student. Holt, 294-6928.

LOST

BASSETT HOUND, female, named "Sugar," lost near Eubank and Spain area, reward. Asher, 821-0329.

SHARE-A-RIDE

VANPOOL RIDERS WANTED, along N14 and Frost Rd., \$31/mo., ride every day. Rentzsch, 281-5017 or Burns, 281-3922.

Whoop It Up at Western Night — Next Friday, Sept. 18

POLISH UP THE BOOTS, grab that 10-gallon hat, and ride on over next Friday night for another Western wingding at the old C-Club corral. Start out with some great two-for-one fare from the chuck wagon: filet mignon or fried shrimp, your choice of two entrees for \$14.95. Next, it's wahoo wind sprints as you stomp the night away (from 8 p.m. to midnight) to sagebrush-special music from those ever-popular Isleta Poor Boys. Don't miss the stagecoach; reserve your space by calling 265-6791.

RACY RHUMBAS are the order of the night this evening as the Freddie Chavez Foundation provides south-of-the-border music for all you Latin music lovers from 8:30 p.m. to 12:30 a.m. Beforehand, Miguel Caro and the Mexican Fiesta Dancers perform their authentic regional dances of Mexico during a colorful floor show from 7:30 to 8:30. (Miguel, you'll recall, is the one who manages to dance while balancing a trayful — mere trifle? — of water glasses on his head at the same time.) The two-for-one special features delicious delicacies, deftly delivered by Chef Henry and the kitchen crew (prime rib or snow crab). If you've not already done so, better make that reservation right now; the festivities are only hours away!

IT'S CONSIDERED POLITIC to be at a most important event for C-Club members: the Annual Meeting next Monday night (Sept. 14). Here's your chance to get in your two-cents-worth about future Club activities and to vote for your favorite Board candidates. The meeting starts at 5 p.m.; voting's from 4:30 to 6. Plan to stick around afterward for free beer and munchies while ballots are counted. If you can't make it to the meeting, don't despair; you can vote earlier at the Club — today or Monday during your lunch break (anytime between 11:30 and 1) or tonight after work (6 to 8).

THERE'S NOTHING HIT-OR-MISS about the

dedicated dart-devotees who congregate at the lounge on Tuesday nights at 4:30. The C-Club Dart League's fall competition begins next Tuesday (Sept. 15), so target the date on your calendar.

T-BIRD CARD SHARKS circle the tables again on Thursday, Sept. 17, starting at 10:30 a.m. Head shuffler Jim McCutcheon, who always calls a spade a spade, reminds us that, along with the gaming, there'll be free coffee, refreshments, and prizes. Now *that's* a real deal.

ANOTHER SUNDAY-PUNCH BRUNCH comes up Sept. 20 for all you folks who recognize a true bargain when you see (or eat) one. The buffet, served from 10 a.m. to 2 p.m., features a mouth-watering menu: blueberry pancakes, Western omelets (unlike the *Eastern* kind), baron of beef, fried chicken, tossed salad, corn O'Brien, hash browns, fresh fruit, an assortment of cakes and puddings, salsa, juices, and other beverages. Cost is \$5.95 for adults, \$3 for children from 4 to 11, and free for kids under 4. Tote along your C-Club membership card, and take a buck off the tab (discount limited to \$2/family).

A SEMINAR on the oil/gas developmental drilling industry is set for Sept. 16 at 4:45 p.m. in the Eldorado room. Chris Meyers of Bogert Oil Co. and Guy Trujillo of Financial Network Investment Corp. discuss the effects of tax reform, current import trends, and other questions related to the industry. Contact Guy at 291-8585 if you have questions or need further information.

IF OUR LATE AUGUST RAIN had just been snow, these folks would have been in seventh heaven! Even if the white stuff is a few months off, the Coronado Ski Club's getting ready right now. Its annual Ski Fair is next Tuesday, Sept. 15, starting at 5:30 p.m. at the C-Club patio. This is your chance

to get the straight skinny on 1987-88 ski trips, and sign up if you like (no cash, please — bring your checkbook). Fair displays help you learn what's new for the coming season at area ski resorts and give you an up-to-date look at the latest in ski equipment and attire. You don't have to be a CSC member to attend the festivities, but you can join this fun-loving group that night. And remember, ponder precipitation (preferably the solid kind).

TWO WEEKS FROM TONIGHT (Sept. 25), a variety group called South Side provides the dance music from 8 p.m. to midnight, right after the two-for-one special. Featured menu selections that night are prime rib or snow crab. Reservations people are standing by, so why not give the Club office a call?

IT'S A BIG, WIDE, WONDERFUL WORLD and you can prove it to yourself by signing up for a trip or two planned by the ever-efficient C-Club Travel Committee. A couple of the offerings:

Lei/Luau Land — Hawaii (Oct. 30-Nov. 9) is definitely "go," according to Travel Committee honcho Marlene Smith. Some 50 people are signed up to head for the Islands, but there's still space available on this dream of a trip that has something for everyone: visits to three islands, an authentic luau on Kauai, first-class hotels, all kinds of optional ground tours. The \$989/person (double) price includes RT air fare from Albuquerque, 10 nights' lodging, a lei greeting in Honolulu, the luau, rental car per couple on Kauai and Maui, and much more. Triple occupancy cuts the price to \$918/person.

Tinsel-Town Travel is something you won't want to miss (Dec. 11-13). Get warmed up for the holidays in Las Vegas on this fantastic foray into glitz-and-glitter country. The cost of \$169/person (double) includes RT air fare, two nights at the Four Queens Hotel, and fun books for Vegas attractions. Reserve your space with a \$50 deposit by Oct. 26; final payment not due until Nov. 16.

Savings Bond Allotments At All-Time High



All-American Rain Check

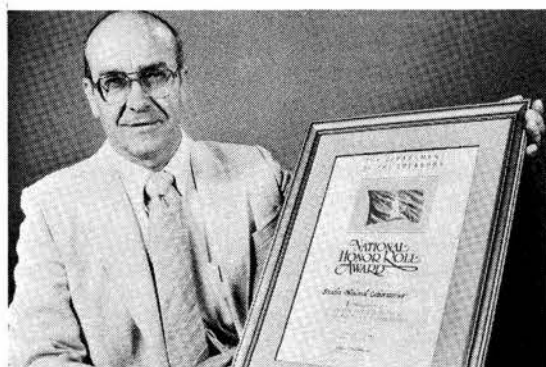
Sandians will invest a record amount this year in U.S. Savings Bonds as a result of last spring's Bond drive. Allotments for the current year total \$2,702,746, an eight percent increase from a year ago — strong evidence that many employees sought shelter under the "Bond Umbrella" in 1987.

"As usual, the Bond effort received continued outstanding support from employees at all locations — Albuquerque, Livermore, Tonopah, and Pantex," says Dick Craner (3180), 1987 Savings Bond chairman. "That kind of support is appropriate from people at a national laboratory such as Sandia, and employees have every right to be proud."

Monthly Average of \$27.27

The total Bond allotment translates to an average \$27.27 per month per employee, compared to \$25.09 a year ago. Forty-five percent of Labs employees are at or above the Bond-a-month level, up from 43 percent last year.

Final stats on the 1987 Bond drive show that 95.7 percent of Sandians now buy Bonds, a 2.8 percent increase in participation from the beginning of the campaign. "That participation level almost certainly guarantees Sandia's continuing membership in the 'top 10' of U.S. corporate leaders," says Dick.



1987 BOND CHAIRMAN Dick Craner (3180) recently received Sandia's National Honor Roll Award from the Department of the Treasury. The award, signed by Secretary of the Treasury James Baker and U.S. Treasurer Katherine Ortega, recognizes the Labs' many years of outstanding support of U.S. Savings Bonds through payroll savings.

Four directorates achieved 100 percent participation in the Bond drive; they are 400, 1400, 2900, and 6500. Honorable mention goes to members of the "Almost 100 Club" (98 percent or better): 1200, 2100, 2500, 2800, 3500, 6200, 6300, 7100, 7200, 7500, and 9200.

"Our outstanding campaign results reflect a lot of hard work by members of the Savings Bond Committee, as well as VP and directorate reps," notes Dick. "They deserve a round of applause, as do the many Sandians who continue to recognize Bonds as the 'Great American Investment.'" ●PW

Take It to The Limit



The objective of research is to find limits, whether they tell us bad news or good. Success is defined by the act of finding the limits.
Joel Rosenkrantz (on Ian Ross), *Bell Lab News*



STILL BRINGING HOME TROPHIES, "Fighting Lion" Eric Lamb (3154) was a big winner at the USCA Southwest Open karate meet in Austin, Tex., on Aug. 15. He first won the top trophy in the black belt lightweight class. In the finals, he went on to defeat California's heavyweight grand champion to become the new USCA Black Belt Grand Champion.